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USSR Report

ECONOMIC AFFAIRS

No. 959

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ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

INTENSIVE FACTORS MUST NOW BE STRESSED IN BUILDING UP THE ECONOMY

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 1, Jan 81 pp 3-15

[Editorial: "The Borderline of Two Decades"]

[Text] Isn't it surprising: it is as if V. I. Lenin's unaging words, which are filled with energy, had been addressed to today's concerns, to each of us: "We must move ahead, we must look ahead, we must bring to the congress that practical experience in building up the economy that is well thought out and digested attentively by common labor and common efforts."*

Yes, even today we have brought to the next party congress our experience in building up the economy, in all its complexity, that has been confirmed by practice, taking heart from the successes, not concealing the difficulties, and soberly analyzing our own blunders and unused potential.

The 26th CPSU Congress is taking place at a very significant time, at the borderline of the 70's and 80's of our century. It is appropriate at this time to look back and to comprehend deeply the path that has been traveled, so that, when we advance, we will stand upon firm ground, upon valuable historical experience.

In implementing 24th and 25th CPSU congress decisions, our country moved ahead greatly in developing the national economy, in raising further the people's material and cultural standard of living, and in strengthening our motherland's defensive might. The material base of social production--the fixed productive capital of all branches of the national economy--increased about 2.1-fold during the 10 years, exceeding 1 trillion rubles in monetary terms. In so doing, during the Tenth Five-Year Plan the figure will be augmented more than one-third.

Absolute worker manning--the basic work force--grew. According to data of the last census, on 17 January 1979 about 135 million people were at work in the country's economy.

The most generalizing economic indicators of the country's development are the gross social product and the national income of the USSR. During the 10 years they grew between 1.6-fold and 1.7-fold. In so doing, the total volume of gross social product exceeded 1 trillion rubles, and 450 billion rubles of total national income was produced, or an estimated 1,700 rubles per capita. The pace of development of industrial production was rapid: average growth was 1.8-fold but there were still higher growth rates in the industries that set the pace for technical progress: machinebuilding and metalworking 2.6-fold, and chemical and petrochemical industry more than 2.2-fold during the 10 years. Freight turnover for all types of transport during this time increased 1.6-fold, and the volume of construction and installing work increased 1.4-fold.* The average annual amount of agricultural product during the first 4 years of the 10th Five-Year Plan exceeded the 1966-1970 level by 24 percent.

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*Lenin, V. I. Poln. sobr. soch. [Complete Collected Works], Vol. 40, page 142.

The graphically evident growth in scale of production was achieved to a great extent by increased labor productivity. During the decade the productivity of social labor rose more than 45 percent--for industry it was up 58 percent, for agriculture 39 percent (computed as an annual average in relation to the Eighth Five-Year Plan) and it increased 1.4-fold for construction and about 1.3-fold for rail transport.

The growth in scale of social production and the growth in labor productivity were the basis for raising the people's standard of living. Real income per capital during the decade increased 1.5-fold. In 1980 the average monthly wage for blue-collar and white-collar workers was 167 rubles, but with the addition of credits and benefits from the social consumption fund, it was more than 230 rubles. Consumption funds increased at a still higher pace: in 10 years it rose 1.8-fold, reaching about 116 billion rubles (more than 430 rubles per capita).

Provisioning of the population with housing and institutions for social, cultural and personal-amenity purposes increased considerably. During the 10 years about 1.70 billion m^2 of housing were introduced into operation, more than 21 million apartments were built, and housing conditions improved for more than 107 million people. Total apartment space per city dweller averaged 12.9 m^2 in our country in 1980.

Behind all the named figures stands the enormous work of the Soviet people, its working class, its kolkhoz peasantry, and its laboring intelligentsia.

Yes, much has been done. But we remember well Lenin's words, which were quoted at the start of this article: "We must move ahead, we must look ahead...."

Ahead are new tasks and higher goals. In order to advance more successfully, we must, on the one hand, take up the weapon of advanced experience and skillfully promote the positive tendencies in the national economy, and, on the other hand, reveal fearlessly existing deficiencies and unused reserves.

At the June 1980 CPSU Central Committee Plenum the necessity to critically interpret oversights and deficiencies that, unfortunately, exist in management practice, was emphasized. As is known, Comrade L. I. Brezhnev gave a deep analysis of these deficiencies in his speech at the November 1979 CPSU Central Committee Plenum. He emphasized that we have not been able to move ahead as the plan contemplated in the area of further raising production effectiveness and work quality. "The final result," Comrade L. I. Brezhnev emphasized, "was that we received less than we should have, less than our potential would permit, and from this there are disproportions, shortages and insufficient reserves."

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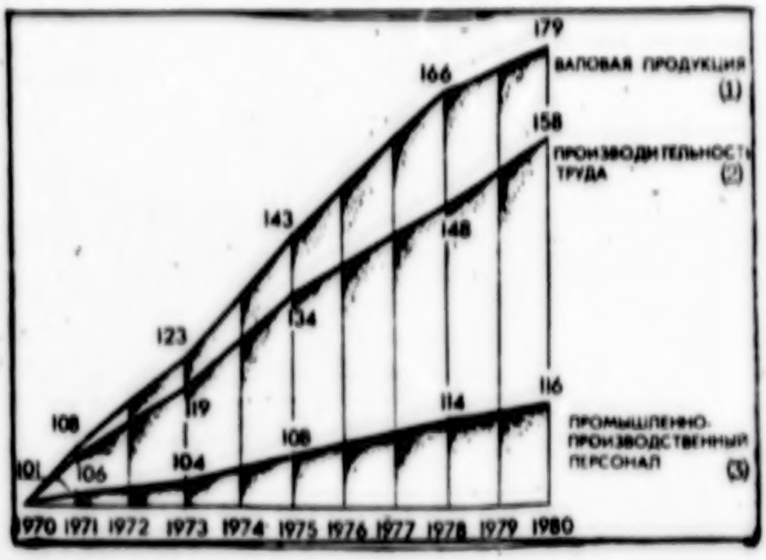
*Here and hereafter the indicators for 1980 are computed in accordance with the annual plan.

Growth of Basic Indicators of Industry's Development, in Percents of 1980

Key:

1. Gross product.
2. Labor productivity.
3. Industrial-production personnel.



These deficiencies and oversights led to a considerable slowing of the pace of the country's economic development during the 10th Five-Year Plan. Growth in national income used for consumption and accumulation was 41 percent in 1966-1970, 28 percent in 1971-1975 and about 20 percent in 1976-1980.

A definite reduction in the pace of economic development during the latter period was directly caused by a slowing in labor productivity growth. Productivity of social labor increased 39 percent during the Eighth Five-Year Plan, 25 percent during the Ninth, and about 17 percent during the Tenth. An especially appreciable reduction in the pace of labor productivity growth occurred in industry (18 percent during the 10th Five-Year Plan in comparison with 34 percent during the Ninth), in construction (14 percent correspondingly compared with 29 percent), and, finally, in rail transport (3 percent correspondingly compared with 24 percent).

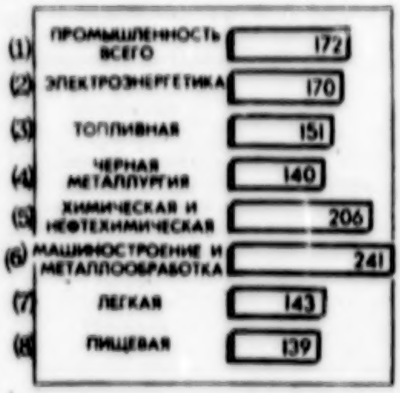
These unfavorable changes in the dynamics of labor productivity were accompanied by a substantial reduction in yield on capital in the national economy, primarily in industry. In the latest period each 1-percent increase in national income required a 2-percent increase in the amount of fixed productive capital.

The unfavorable tendencies in economics for all this time were directly and openly publicized at party central committee plenums and were the subject of the most earnest analysis and the cause of a large number of very important economic decisions.

During the November 1979 CPSU Central Committee Plenum a radical task was set: to accomplish during the 11th Five-Year Plan large changes in the structure and proportions of the Soviet economy, to improve the existing ties of industries and regions, and to find those links where the greatest and most rapid benefit can be obtained at least expense.

The party's policy about raising social production effectiveness was occasioned by the changes that are occurring in the very prerequisites for the country's economic development. The potential for growth of the national economy through extensive factors--the acquisition of additional manpower, productive capital, capital investment, fuel and raw materials is being curtailed by virtue of a number of objective factors. So, in order to maintain the required pace of economic and social development, support must be given to mobilizing intensive factors--speeding up

Growth of Total Product Volume by Branch of Industry in 1979, in Percents of 1970



Key:
1. Industry as a whole.
2. Power engineering.
3. Fuel.
4. Ferrous metallurgy.
5. Chemicals and petrochemicals.
6. Machinebuilding and metalworking.
7. Light industry.
8. The food industry.

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labor productivity growth, slowing the reduction in yield on capital, raising capital-investment effectiveness, and reducing the materials intensiveness of social production.

As a consequence of demographic processes that were caused by the Great Patriotic War, growth in the able-bodied population during the 11th Five-Year Plan and, on the whole, up to 1990, will be one-third to one-fourth less than in the preceding period, the main growth being expected through the indigenous population of the Central Asian republics and Azerbaijan, while, at the same time, there will be no growth whatsoever in labor resources in the overwhelming majority of areas of the Russian Federation. Thus, our country will for the first time be faced with the need to achieve all growth in social production through increased labor productivity. This will require the broadest mobilization of reserves and it will define the approach to each branch of the national economy.

In recent years, greatly because of a lag in ferrous metallurgy, the rate of growth of capital investment has been curtailed. While during 1971-1975 state capital investment rose by 40 percent, in 1976-1980 it grew by only 19 percent. It must be remembered that during the 11th Five-Year Plan many branches of the economy must increase production volume and improve economic indicators with a stable capital investment volume. This requires that economic workers greatly improve the use of existing production capital: by raising the shiftwork factor in machinebuilding, by making better use of rolling stock in transport and of earthmoving equipment and cranes in construction, and so on. Simultaneously the state of affairs in capital construction is to be radically improved--the time taken to introduce facilities into operation is to be speeded up, the amounts of uncompleted construction are to be reduced, the budget-estimated cost of facilities being introduced is to be reduced, and construction quality is to be raised.

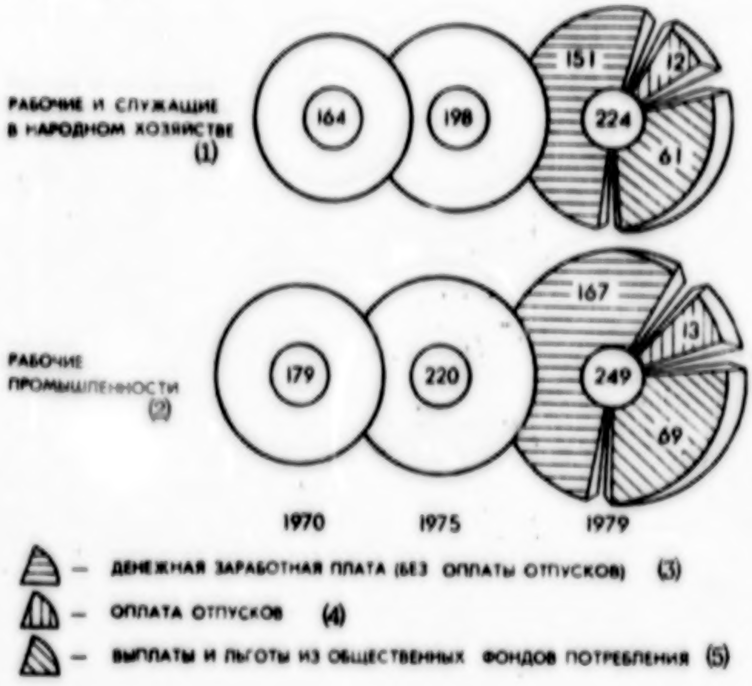
Comrade L. I. Brezhnev has called attention in very timely fashion to the fuel and energy problem. A most serious task is being faced: to improve considerably the country's fuel and energy balance by reducing the share of oil as a fuel. This will require a decisive increase in the pace of gas production, especially in West Siberia, the rapid development of nuclear power, not only for generating electricity but also for district-heating needs, a speedup in the assimilation of the Ekibastuz, Kansk-Achinsk and Kuznetsk fuel and power complexes, and economical use of fuel and energy in every possible way.

The task of developing bases for power-engineering of the future has been placed on today's agenda. This involves long-range plans for the wide construction of nuclear power stations with breeder reactors, further promotion of research on

Average Monthly Wage of Blue-Collar and White-Collar Workers with the Addition of Credits and Benefits from Social Consumption Funds, in Rubles

Key:

1. Blue-collar and white-collar workers in the national economy.
2. Workers of industry.
3. Monetary wage (without pay for leave time).
4. Pay for leave time.
5. Credits and benefits from social consumption funds.



controlled thermonuclear fusion, the production of synthetic liquid fuel, and the use of solar and geothermal energy. Gradual solution of these large-scale tasks will enable neutralization of the objective worsening of mining-geology and transport conditions in the fuel industry, satisfaction in appropriate fashion of the country's rising needs for energy and heat, the fulfillment of our commitments to ship fuel to socialist countries and the exportation of fuel in order to augment the country's currency reserves.

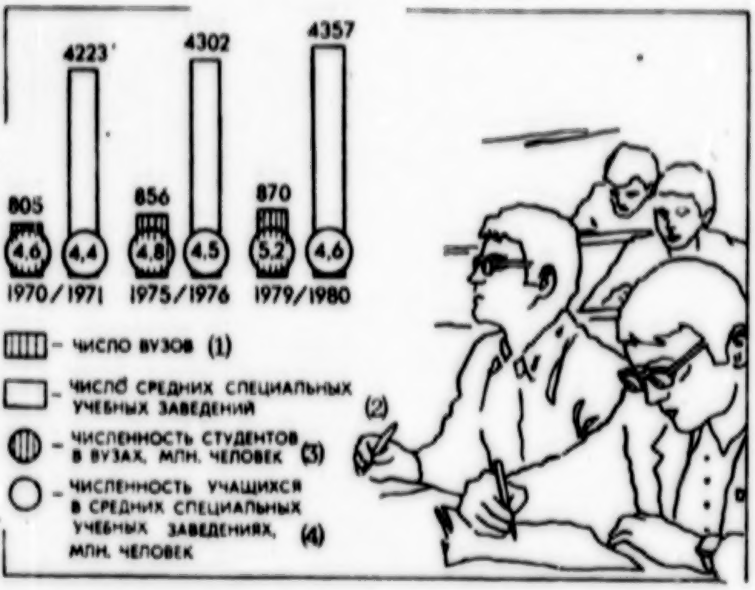
Other raw-materials branches of the economy also face complicated tasks. As is well known, our country has achieved huge successes in developing these branches. We recover more oil, mine more coal and iron ore, cast more pig iron and steel, do more logging and produce more cement and reinforced concrete than any other country of the world. Mere maintenance of the enormous scale of extracting and processing raw materials already achieved requires ever-increasing capital investment. After averaging the indicators for all the raw-materials industries, we rightfully say that while 20 years ago 2 rubles of capital investment had to be spent per ruble of increase in the production of raw materials, 10 years ago it was 3 rubles, it is now about 4 rubles, and in the long germ 5-6 or more rubles will be required.

Under these circumstances, it is more effective in many cases to apply funds to the saving of fuel and raw materials by increasing the thoroughness of processing them, by using them in integrated fashion, and by improving the quality of the materials produced from them, be they metals or articles made of wood or chemical products. At the November 1979 CPSU Central Committee Plenum the task of insuring a decisive turn to quality and to savings of metal was set especially severely for the 11th Five-Year Plan.

We see that in all areas--the use of labor resources, productive capital and capital investment, and the extraction and processing of raw materials--the intensification in every possible way of social production and increased effectiveness and quality stand everywhere as the main problems. The 11th Five-Year Plan points out concrete ways for doing this multifaceted work and sets the goals that must be

Higher and Secondary Special Education Institutions, at the Start of the School Year

Key:
1. Number of higher educational institutions.
2. Number of secondary special education institutions.
3. Number of students in higher educational institutions, millions of persons.
4. Number of students in secondary special educational institutions, millions of persons.



In 1979 the country's vuzes graduated 790,000 specialists, 37 percent by educational institutions for industry and construction, 8 percent by schools for economics and law.

Secondary special educational institutions graduated 1,254,000 specialists, 38 percent from educational schools for industry and construction, 14 percent from schools for economics and law.

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reached. There is to be a sharp reorientation from extensive to intensive methods in developing the national economy.

This involves extremely intense changes in the economic process and the sources and the factors that affect expanded reproduction. While until recently three-fourths of our economic growth was made through the involvement of a growing volume of resources in production, that is, through extensive factors, and only one-fourth of it was accomplished through intensification factors, in the long term a conversion is to be made to the full predominance of intensive factors in economic development.

A deeply thought-out system for economico-social and scientific and technical measures and the accomplishment of a kind of broad maneuvering of the national economy for purposes of transferring the country's economy from the rails of primarily extensive development to the rails of primarily intensive development will be needed here. The main lever for this restructuring was named at the November 1979 CPSU Central Committee Plenum. This was a rise in the level of control in the broadest sense of the word.

Concrete measures for improving planning and the whole economic mechanism were defined by the well-known decree of the CPSU Central Committee and the USSR Council of Ministers that was adopted in July 1979. Obviously, measures to perfect the organizational structure for control of the economy and to improve the economic mechanism in transport, agriculture, trade and branches of the nonproductive sphere still remain to be developed and executed.

An important question that has been repeatedly raised in directive documents of recent years is a strengthening of labor discipline in all areas of work, including monitoring of the fulfillment of plan tasks and adopted decisions. The problem of discipline and responsibility for the assigned task has acquired exceptional importance in the modern era. For the scale of the economy has risen gigantically and economic relationships have become more complicated. Powerful and expensive equipment is now in the hands of workers, and, in the final analysis, the labor of hundreds and thousands of other people depends upon the work of each person. Violations here of labor discipline and technology, slackness and even simply an indifferent attitude toward the task will lead to vast losses. This is why social factors for raising social production effectiveness have now been advanced to first priority. The maintenance of order and a stable labor rhythm, training in responsibility, and provisions for motivating people toward work results are urgent requirements of our time.

Party and government decrees on improvement of the economic mechanism orient our managerial personnel precisely and primarily toward mobilzing economic, organizational and social factors for an increase in production effectiveness. In approaching economic tasks from a sufficiently broad social viewpoint, we see that they are inseparably linked with problems of education, social and production sophistication, and the whole system of ideological and educational work. The coming 11th Five-Year Plan also sets for us a multitude of tasks in this area that are not easy. In the final analysis they all boil down to creating conditions that favor the development of the Soviet people's creative potential--the main productive force of society--in every possible way.

The strategic line for intensifying the economy is based upon an acceleration of scientific and technical progress. The historic statement advanced by the 24th party congress about the need to combine the advantages of the socialist system of economics with the achievements of the scientific and technical revolution has not become obsolete. And today it rings out more urgently than ever.

If one scrutinizes the channel through which scientific and technical achievements are injected into the national economy, then it is easy to notice that no less than two-thirds of all the benefit from scientific and technical innovation is obtained through the system of machines and equipment that implements the modern technology of production. Machinebuilding always has been the core of the national economy. Where scientific and technical progress has been speeded up, its role has grown still more. It is machinebuilding that determines the technical aspect, and with it, the economic indicators, of the work of all branches of the national economy.

Whatever question in national economic development we take up, it rests in the final analysis upon the quality and quantity of machines and equipment. The complaints about low quality of metal do not abate--and the cause of this lies primarily in the fact that there are not enough progressive metallurgical units in ferrous metallurgy (installations for continuous casting of steel, units for vacuum evaporation, mills with regulatable rolling, equipment for thermal hardening, and so on). We see with distress the low pace of growth in labor productivity in the coal industry and the slow growth in the country's coal mining--and the cause is the lag in coal-machinery manufacturing, which is producing an excess of models of longwall-mining machinery and equipment for transporting coal and for preparing it that are heavy and insufficiently productive in comparison with the best world models and which has not arranged for the production of machines for progressive technologies, for example, for hydraulic mining. We complain about the slow pace of construction of transport arterials--but this is basically governed by inadequate modern earthmoving equipment (powerful bulldozers, hydraulic excavators, heavy dump trucks and large-load scrapers). Poor mechanization and difficulties in carrying out the growing amounts of loading and unloading work leaps to the eye, but indeed this is a direct consequence of the lag in producing loaders and other types of special equipment. Yes, and the look itself of machinebuilding is defined primarily by the level of development of its own machine-tool manufacturing, which, as is well known, has lagged seriously.

This is why it is necessary in the long term to pay priority attention to the production of machines and equipment, to redistribute capital investment to these industries, to convert to the production of a new generation of machines that will meet modern requirements completely, and to achieve a decisive upgrading of all machinebuilding so that other branches of the economy may be reconstructed with equipment that it produces.

The 11th Five-Year Plan should change the outlook of many economic supervisors to the role of the infrastructure, to its problems and to its most complicated relations with the economic and social aspects of management. The necessity for a review of some traditional notions in this area becomes especially evident when we deal with the eastern regions of the country and with involving the new and richest parts of Siberia in economic turnover.

A rise in production effectiveness depends essentially upon consistent improvement of the system for economic control. L. I. Brezhnev gave considerable attention to this great and urgent topic in his speech at the October 1980 CPSU Central Committee Plenum.

In the modern era the necessity for making wide use of the specific-program method in planning is growing. As L. I. Brezhnev pointed out, each such program should be a substantiated plan of measures that is based upon precise computations, which are aimed at the final result, at the full solution of one problem or another. It is important that the program define the stages and sequence of the tasks solved. It was emphasized that there must also be, of course, a system of control for the program, which will establish precisely personal responsibility for each portion of the work and which grants the necessary rights.

The question about the correct correlation between centralism and local initiative was examined. The country's single economic complex functions on the basis of a complicated system of interbranch and regional-production relationships. As L. I. Brezhnev said, "only the center can effectively supervise this complex as a single whole and oppose bureaucratic and parochial tendencies. On the other hand, for normal functioning of the economy, it is necessary to develop in every possible way the initiative of the people on the spot--labor collectives and economic supervisors. The bulk of operational questions must be resolved precisely where they can be solved quickly, without superfluous delay and coordination."

The October 1980 CPSU Central Committee plenum is aiming the party and the entire Soviet people at doing greater work. In the forthcoming decade, conversion of the economy to the rails of intensive development should be completed, and the productivity and quality of work should be raised sharply. The party points out that a rise in the level of work in economics and the education of each person in efficiency, responsibility and initiative are still indispensable prerequisites to production successes.

The problems of recent times that we have named have been at the center of attention of many economics institutes. The party's Central Committee and the Soviet Government have set important tasks for the science of economics: research in ways to raise the effectiveness of social production in the modern era, to speed up scientific and technical progress, to provide for the proportional development of the country's economy, and to solve major social problems that will enable the Soviet people's standard of living to be raised. "In order to raise consistently the people's welfare," said Comrade L. I. Brezhnev at the November 1979 plenum, "it is necessary to implement with double or triple energy the party's policy of raising effectiveness and quality. There are no alternatives to this policy, and it should be implemented constantly during the 11th Five-Year Plan."

The CPSU Central Committee and USSR Council of Ministers decree about further improving the economic mechanism has given support to long-range planning. The cycle of long-range planning now will be commenced with the development by the USSR Academy of Sciences of an integrated program for scientific and technical progress for a 20-year period. Both natural-science and technical institutes and economics institutes of the Academy of Sciences will take part in preparing this all-embracing document about long-term prospects.

The prophetic words that an economist should look ahead, toward technical progress, were Lenin's. The fact that integrated programs for scientific and technical progress will be made the basis for long-range plans opens up a wide field of activity to economists. Work on five-year plans and long-term prospects will require maximum mobilization of effort from all of us. For indeed it is at this stage of planning that the more effective paths for developing the economy are discovered and evaluated.

Nationwide discussion of long-term plans for developing our society will, it goes without saying, supply the richest information and will point out possible reserves for raising work quality in all areas of constructing communism.

In improving planning and the whole economic mechanism, we will achieve the expected results only if simultaneously we will improve the form of economic thought of our personnel and teach them methods of control. This is one of the most important tasks of the science of economics. And our journal will try to make the contribution to its solution that is within its power.

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CSO: 1820/107

MATYUKHA ELABORATES ON 1981 USSR CSA PLAN

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 81 pp 8-19

[Article by I. Matyukha: "1981 Plan of Statistical and Methodological Work of the USSR Central Statistical Administration"]

[Text] The plan "Basic Directions of USSR Economic and Social Development for 1981-1985 and for the Period to 1990" of the CPSU Central Committee for the 26th party congress outlines a program of major achievements during the forthcoming five-year period and for the eighties as a whole. Important and responsible tasks also face statistical organs; they consist of boosting the quality and efficiency of accounting and statistics, improving accounting documentation and reporting in all parts of the national economy in keeping with present-day requirements of management, planning and analysis of operational activity with broad employment of the possibilities of electronic computing technology. Implementation of the measures of the USSR Central Statistical Administration [CSA] stemming from the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 "On Improving Planning and Strengthening the Action of the Economic Mechanism on Raising Efficiency of Production and Quality of Work" is of great importance in the solution of the above-mentioned tasks.

Statistical organs are improving work on systematic observation of the course of fulfillment of plan assignments and economic analysis of information under the conditions of further improvement of the economic mechanism. For this purpose the USSR CSA in coordination with Gosplan SSSR introduced appropriate changes into state statistical reporting. Certain work has been done on further cutting down and simplifying accounting and reporting of enterprises, associations, ministries and departments.

The solution of routine tasks by state-statistical organs stemming from the decree determined the special features of the 1981 plan of statistical and methodological work of the USSR CSA. In addition to traditional work whose results ensure all-round analysis of the course of fulfillment of the State Plan of Economic and Social Development of the USSR for 1981, the plan provides for a number of statistical operations for the purpose of obtaining information for the analysis of new indicators characterizing technical progress, industrial production, construction, material-technical supply, labor and social development, finance and trade.

A leading place in the plan is giving to balance operations, the results of which depict the general results and interconnections in the country's national economy.

These operations include balance of production, use and accumulation of the social product for the country as a whole and for union republics.

On the basis of materials of simultaneous examination of industrial enterprises and reporting statistical data on the development of sectors of the national economy for 1980 according to a concise program an accounting intersectorial balance of production and product distribution in cost terms will be developed. The data of this balance will make it possible to characterize the process of reproduction of the social product for the national economy as a whole and for its chief sectors, to analyze the structure of the social product and the economic interconnections of sectors and to conduct other researches. There is also planned the fulfillment of a number of other balance operations, the results of which will be of major significance for the improvement of management and planning of the national economy.

A considerable volume of work is planned in 1981 on statistics of technical progress. Under the conditions of a socialist society, technical progress serves as the basis of systematic growth of social productivity of labor, increased production output and better well-being of the people. In this connection, statistical investigation of the development and introduction of new equipment, employment of progressive technology, mechanization and automation of production processes in the national economy will be continued and expanded.

Since acceleration of scientific-technical progress is largely determined by the results of work of scientific institutions, a great deal of attention is given in the plan to statistical study of the operation of scientific-research and design organizations of industrial ministries and execution of very important scientific-research, experimental, planning, design and manufacturing operations of ministries and departments.

Information will be collected and worked up on the development and introduction of new equipment, mechanization of labor-intensive and heavy work in industry, construction, mechanization of materials handling work and so on. Considerable work will be done on the study and analysis of information on fulfillment of plan assignments on the development of new kinds of industrial products and removal from production of obsolete designs of machines, equipment, instruments and products and their replacement with new improved products as well as modernization of production equipment at industrial enterprises.

Broad development from the point of view of industrial sectors and the national economy is planned of accounting data relating to the receipt and use of inventions and efficiency proposals, playing an important role in improvement of production and improvement of its efficiency.

In accordance with the tasks stemming from the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, a number of forms of current and annual reporting on statistics of technical progress has been improved. Indicators have been introduced for characterization of the results of work of laboratories, design and experimental units at enterprises (fulfillment of plan of developments, their technical level, annual effect from the introduction of developments and so forth). Reporting has been improved; the data are necessary for control over progress of fulfillment of special-purpose complex scientific-technical programs and the development of new highly efficient manufacturing processes and types of products.

For assessing the fulfillment of the five-year plan at all levels of operational management with a cumulative total since the start of the five-year plan and of the annual plan--with a cumulative total since the beginning of the year, a new form of reporting has been introduced on the basis of chief indicators of technical progress whose data make it possible to analyze profit growth in connection with the manufacture of new products and increase of economic gains as the result of introducing different measures and other indicators of efficiency.

The 1981 plan of statistical work provides for thorough study and economic analysis of industrial production for the country as a whole, for union republics, ministries, industrial associations and enterprises. In accordance with a system of plan indicators provided by the decree of 12 July 1979, a number of existing current and annual reports have been supplemented with new indicators and new form of reporting were introduced utilizing indicators of production output, its cost and labor in industry.

With preparation of separate sectors, a conversion will be carried out in industry to an indicator of net production (normative) and in individual sectors--of commodity production in comparable prices. The indicator of normative net production is meant to eliminate the negative aspects of gross cost indicators, inasmuch as it characterizes newly created production at an enterprise and excludes the cost of the labor of other enterprises and organizations included in materials, component products and services. Consequently, the indicator of normative net production expresses in the highest degree the contribution of each enterprises in the country's national income. In some sectors of industry, this indicator will be used in evaluating the dynamics of the physical volume of production, measuring labor productivity, planning and analysis of the use of the wage fund, computation of return on investment and other indicators of efficiency of industrial production. The indicator of commodity production in comparable plans in plans of associations and enterprises where the indicator of normative net production is used will be determined through calculation only for purpose of supplementary analysis and not for the evaluation of their operation.

In connection with the fact that a gradual transition of enterprises is planned to plan indicators of normative net production, the reporting will make it possible to sum up the totals for industry as a whole and also in the context of territory and ministries for the indicator of commodity production and for a number of enterprises planning on the basis of normative net production--simultaneously for the one and the other indicators.

In the work plan, a great deal of attention is being given as before to the collection and elaboration of accounts on volume of sold production with account being taken of the fulfillment of targets and commitments for its delivery by ministries, associations and enterprises.

An important place is given in the plan to the collection and working up of statistical data on production output in physical terms, including products for export. The corresponding reporting is supplemented with the measurement units of a number of different products, reflecting more fully efficiency of their production, productivity, quality and use properties. The products list of products for which plan targets have been established has been expanded. As in prior years, the accounts make it possible to constantly analyze the production of consumer goods (group "B" products of industry) within the framework of union republics and ministries.

In fulfillment of the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, reporting on the quality of industrial production has been improved first and foremost because of inclusion in it of an indicator of the relative share of products of the highest category of quality, set for ministries as a plan assignment. As before, a large volume of data will be collected and analyzed on the quality of industrial products, their technical level, and the number of products against which claims are made because of their low quality and so forth.

Reporting on labor in industry includes a wide group of indicators: on the size of industrial-production personnel; labor productivity; introduction of scientific organization of labor; movement of number of workers and use of worktime; number of workers doing manual labor, and so on. Many of the aforesaid indicators are developed for ministries, union republics, industrial associations and enterprises. This reporting for 1981 will be supplemented with indicators of limit on the number of workers and employees, normative and actual expenditures of wages per ruble of product, data on the brigade form of labor organization and also indicators of fulfillment of targets for reduction of the share of manual labor. Such information will make it possible to significantly expand and deepen the analysis of utilization of labor and financial resources and efficiency of industry production.

In the work plan, as in former years, provision is made for the working up of data on the use of production capacities--their utilization, capital repairs, growth because of reequipment and implementation of organizational technical measures at production associations and enterprises. A broad group of accounting figures will be collected and elaborated for the analysis of technical-economic indicators of operation of individual sectors of industry and also fulfillment of plans on the cost of industrial output.

For the purpose of deeper analysis of industrial production and its efficiency, provision is made for a number of groupings of production associations and enterprises according to indicators of fulfillment of the limit placed on the number of workers, correlation of the rates of growth of labor productivity and the average wage of industrial production personnel, fulfillment of the plan of cost of commodity production and other indicators for industry as a whole and also within the framework of ministries.

Finally, mention should be made of the work which provides an assessment of fulfillment of counter plans by industrial enterprises for the production of industrial output. Based on wide-scale socialist competition among production collectives, the fulfillment of counter plans is ensured by the use of intraoperational reserves and possibilities for overfulfillment of plan assignments.

The statistical study of natural resources and the environment will be further developed in 1981. A new accounting will be developed of plan fulfillment on the basis of rational use and production of water resources, progress in the construction of water-protection facilities and discontinuing of discharges of contaminated waste water into the water basins of the Caspian Sea and the like. Systematic development of accounting for the country as a whole, for union republics, ministries, geological prospecting administrations and associations on plan fulfillment of geological prospecting operations for different kinds of minerals and their complex utilization. accounting figures are also collected on protection of the atmosphere, implementation of forest-protection measures and preserves, hunting and the like. A number of reports on this branch of statistics will provide an economic analysis of the number of geological groups, their distribution according to size, mineral groups and types of operations, loss of minerals in extraction and expenditures on the protection of nature.

The implementation of a system of measures on raising the level of planning work in the national economy comes to require further improvement of the statistics of capital construction, especially with reference to evaluation of the effectiveness of capital investments, results of the operation of construction organizations, investigation of questions of economic motivation in this sector of the national economy. The 1981 plan provides for the systematic production of a large volume of data on the course of fulfillment of plan assignments for putting production facilities and capacities into operation with the aid of state capital investment, construction of animal-husbandry complexes and mixed-feed plants carried out by kolkhozes, interfarm enterprises and also on plan fulfillment of capital construction with the aid of resources of consumers cooperatives and public organizations.

Special attention is paid to statistical observation of the course of fulfillment of the state capital-construction plan in the regions of Siberia and the Far East, the Baykal-Amur Main Line, the RSFSR Nonchernozem Zone and the country's regional production complexes.

In addition to this, reports will be collected on the course of fulfillment of the plan of housing construction and the construction of institutions of public education, culture, science, health care, municipal and consumer-service enterprises.

In conformity with the coordinated programs of CEMA member-countries, collection of accounting data and analysis of information for construction projects being carried out in our country on an integrated basis and also on the basis of compensation agreements with firms of a number of capitalist countries.

Fulfillment of measures on improving the economic mechanism required the introduction of significant changes and additions to the statistical reports on the capital construction of ordering enterprises, contracting construction and planning organizations. The accounting of ordering clients in place of indicators of total volume of capital investment and construction-installation work now has indicators of their limits characterizing the maximum size of capital-investment outlays for the planned start-up of completed enterprises, facilities or capacities and the creation of normative stockpiles in construction. The accounting data of contracting construction organizations basically include the indicator of volume of commodity construction production, representing the cost of construction-installation work performed at the turned-over completed plant portions and facilities that are fully ready for manufacturing products and providing services. This indicator is also introduced into the accounting operations of the ordering client. The indicator of total volume of contracting work remains in the accounting operations of contracting organizations as a computational indicator. Corresponding changes are introduced into the accounting of planning organizations.

A significant volume of statistical data will be collected on the fulfillment of plan targets for labor in construction, organization of the operation of brigades transferred to the new form of brigade cost accounting, production cost of construction and installation work, quality of construction, existence and composition of pool of construction machines and mechanisms, use of fixed production capital and for other matters.

For a deeper analysis of accounting data on capital construction, many materials are expected to be worked up not only for the country as a whole but also for union republics, oblasts, krays and autonomous republics, ministries and departments and regional production complexes. For the purpose of analysis of the effectiveness of capital investment, wide use of the grouping method is planned in the working up of accounting data. For expansion of the range of analyzed materials, it is planned to also carry out in 1981 a number of selective examinations: of enterprises and facilities that went into full-capacity operation in 1980; losses of worktime and and reasons for personnel turnover in construction organizations; utilization of funds allocated for the reequipment and modernization of existing enterprises.

The materials of a census of construction projects for production use and individual construction projects for nonproduction use carried out as of 1 January 1981 will be of major national-economic value.

An entire complex of work for 1981 is provided according to agricultural statistics. The plan was worked out in such a way so as to provide in the course of the year, with account being taken of the seasonal character of a number of very important agricultural operations, a systematic analysis of progress in the fulfillment of plan targets, deepening of the process of interfarm cooperation and agroindustrial integration, conversion of agricultural production to an industrial basis and boosting of its efficiency.

In addition to effective statistical observation of the course of operations pertaining to sowing of spring crops, taking in of the harvest, sowing of winter crops, cutting of hay and prepation of fodder, it is planned to work up final reporting data of kolkhozes, sovkhozes and interfarm enterprises on collection of the harvest in 1980, on collection of the harvest in 1981 and data on sown areas. Reporting data will be developed on sown areas and the actual harvest yield of agricultural crops on irrigated and drained lands, as well as accounting data of high-quality sowings for all categories of farms. Considerable work is to be done on working up balances of agricultural production for 1980 and the agricultural year. Significant attention is being devoted to a study of lands according to different economic value and land users engaged in agricultural production, according to union and autonomous republics, economic regions, the Nonchernozem Zone, oblasts and krays.

Systematic observation will be carried out of the state of animal husbandry at kolkhozes, sovkhozes and interfarm enterprises. There has been organized an accounting of livestock for all categories of farms as of 1 January 1981. Work is of major significance on computing the production of animal-husbandry products for 1980 and estimating their production for 1981. Balances of animal-husbandry products will be worked out at the same time.

The most important in the plan is work on statistical observation of the course of fulfillment of the plan for purchases of grain crops, vegetables and fruits, industrial crops, cattle and animal-husbandry products. Data is collected for a number of the purchased products on their quality.

There is planned wide-scale elaboration of the 1980 annual reports of kolkhozes and sovkhozes--the basic producers of agricultural products. At the same time, a number of groupings of the aforesaid farms will be made according to indicators of sown areas and yield of agricultural crops, number of livestock and their productivity, production cost of agricultural products, value of gross production and level of labor productivity, size of profit and profitability, marketability of individual sectors of production and level of specialization as well as the value of fixed capital.

The materials of annual-report developments will make it possible to make an all-round analysis of questions of gross, commodity and net production of kolkhozes and sovkhozes, production cost and profitability of products, number of workers, wages and productivity, mechanization of basic work in farming and animal husbandry, use of fixed capital and production capacities.

In 1981, statistical material-technical supply faces responsible tasks, consisting of the collection and analysis of data on the fulfillment of supply plans, utilization of physical and raw-material resources in the country's national economy. For this there is planned systematic development of the reporting of main administrations for supply and sale [soyuzglavsnabsbyty] on deliveries to the most important users--ministries and departments--of ferrous and nonferrous metals, petroleum products and coal, pipe and metal products, construction and lumber materials, machinery, equipment and other products. Deliveries are specially investigated of industrial products to agriculture, first fo all, tractors, motor vehicles, different kinds of agricultural machinery, mineral fertilizers, chemical feed additives and other materials.

For analysis of the operation of enterprises for the purpose evaluating the fulfillment of plan targets, accounting reports are periodically collected on cooperative deliveries--intersectorial deliveries of cast-iron, steel and nonferrous casting products, forgings, stampings and plastic products.

In conformity with the requirements of the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, work is increasing on statistical study of savings of material resources in the national economy: new reporting has been established for ministries and departments on norm fulfillment in expenditure of fuel, thermal energy and electric power; expenditure of materials and items in construction in comparison with production norms. Reporting has also been introduced relating to reasons for overexpenditure of materials and items in the national economy.

In connection with studies on the indicated questions, major significance is to be attached to data on actual expenditure of raw and other materials, fuel and electric power on the production of the most important types of products and operations.

In complex analysis of expenditures of material resources, statistical reporting will be used on surpluses, receipts and expenditure of raw and other materials in the process of production-operational activity and carrying out of capital construction in the national economy.

In statistics of material-technical supply, an important place is occupied by the working up of balances of a number of important types of industrial products. In this connection, major importance is presented by the development of a reporting fuel and power balance for 1980, as well as of a number of other balances. These balances make it possible to analyze existing proportions in the formation and distribution of individual forms of material resources, to analyze possible discrepancies in the distribution of resources and so on. In the light of new tasks on further improving management and planning in the national economy, the working up and content of many balances have been significantly improved.

Analysis is also carried out of basic indicators of the operation of supply and selling organizations--the level of their gross and net production, use of fixed capital, delivery of products for production and technical use through direct long-term operational channels and the like.

It should be noted that the work plan provides for conducting in 1981 a number of inventories and stocktaking for securing additional information for reports: stocktaking of tractors, individual types of machines and equipment for 1 June 1981; an inventory of the stock of metalworking and casting equipment and of the number of workers engaged in servicing is scheduled for 11 February 1981 and others. An inventory has already been taken of surpluses of a number of materials and unmounted equipment as of 1 January 1981.

In the general complex of 1981 statistical studies, an important place is assigned to the study of the operation of transport and communications. This is predetermined by the big role of this sector of the national economy in ensuring the fulfillment of state plans for the development of the country's economy.

On the basis of the accounting reports of the pertinent ministries and a number of supplemental accounting materials, a systematic analysis is made of the fulfillment progress of plan targets by railroad, maritime, river, motor, air and also pipeline transport. One of the basic indicators of the analysis is freight turnover according to forms of transport, the initial materials for the assessment of which are data on the volume and distance of freight haulage. This indicator is used for the calculation of a number of derived characteristics of the quality of operation of individual forms of transport, for example, average distance of freight hauled, freight intensity [gruzonapryazhennost'] and the like.

Indicators of use of rolling stock, labor productivity, freight delivery time, cost of railroad hauls and the like will be analyzed on the basis of the railroad system. These indicators are also analyzed for other types of transport while taking into account their specific characteristics. For investigation of the participation of different forms of transport in the country's freight turnover for 1980, a consolidated transport balance will be developed of import and export of individual types of freight for the country's economic regions and individual union republics.

A thorough study of economic relations, expressed in the formation and distribution of financial resources in the national economy is contemplated with statistics of finance and prices. The planned work for 1981 will make it possible to analyze constantly the basic indicators of the operation of the country's financial-credit institutions--fulfillment of the State Budget for basic articles of its receipts and expenditures, credit-payment operations of Gosbank SSSR and Stroybank SSSR and operations of Gosstrakh SSR [Main Administration for State Insurance] and savings banks.

As in the plans of former years, a thorough study and analysis will be made on the basis of current and annual accounting reports of the financial indicators of the operational activity of production enterprises and sectors of the national economy--plan fulfillment of profit and profitability and also the state of own and working capital, above-norm surpluses of commodity stocks and so on.

In the development of the operational plan for 1981, accounting and statistical reporting underwent further development in the light of the provisions of the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 on the organic unity of planning and the use of economic key factors and stimuli. With the transition to new indicators of production planning in industry and construction, statistics of finances and prices will ensure an all-round analysis of cost-accounting relations and the forming of economic incentive funds. The size and use of these funds will be in direct proportion to fulfillment of the plan for deliveries of products on the basis of contracts, raising of labor productivity, improvement of the quality of products and profit growth. A new form of reporting has been introduced for characterization of the formation and use of the resources of the single fund for the development of science and technology.

A significant amount of work is being done on price statistics. In 1981, an accounting will be made of the change in value set in 1980 of industrial products in connection with the introduction of the new wholesale prices for these products. According to the totals for 1980 for union republics, ministries and departments, data will be collected on average wholesale prices and profitability of the most important articles in heavy, light and food sectors of introdustry, profitability of basic forms of services for consumer services for the population and so on.

A significant part of the 1981 plan of statistical work consists of studies of social development, growth of the people's well-being, conditions and mode of life of the Soviet people. The information necessary for this will be collected by means of working up current and periodical accounting reports, carrying out of inventories, selective examinations and a number of one-time calculations.

In 1981, working up of the materials of the 1979 All-Union Population Census will be completed. Its data on the size and composition of the population according to sex, age, education, training, nationality, size and makeup of families, location of labor resources, the social-economic makeup of workers and the like, elaborated for the territory of the country are of major national-economic significance. They were widely used in the development of the Basic Directions of Economic and Social Development of the USSR for 1981-1985 and for the Period to 1990 and are of major significance in the solution of current problems of management of the development of the national economy. In 1981, the publication of the materials of the All-Union Population Census will be continued.

Under conditions of implementation of measures for intensifying the effect of the economic mechanism on boosting efficiency of production and quality of work, statistics of labor and wages resolve a number of new tasks relating to the undeviating development of the country's economy and well-being of the people. In 1981, systematic control will be exercised on the basis of accounting data over the progress of fulfillment of the plan (limit) on number of workers and employees and the wage fund for the national economy as a whole and for union and autonomous republics, oblasts, krays, sectors of the national economy and also ministries and departments.

In connection with the need of working up balances of average labor resources for the years with the distribution for urban and rural localities, the plan of statistical work provides for calculations of individual items of the blance for 1 July 1980 and for 1 January 1981, particularly the number of: students of working age studying who are studying while not working; elderly people and teenagers among kolkhoz members taking part in the work of kolkhozes; nonworking pensioners who are able bodied and others. There will also be computed a balance of labor resources averaged for 1980 with distribution of the population employed in the national economy according to soal groups and sectors of material production and nonproductive sectors for the country as a whole and for union republics and also a trial calculation of the balance of labor resources selectively for some of the country's cities. In 1981, a study will be made of the pendulum migration of workers and materials, the materials of which are required for making a balance of labor resources on a territorial basis.

Among other works provided by the plan, there should also be pointed out collection of data of labor productivity, job placement of the population, acceptance and elimination of manpower and use of worktime, training of skilled workers within the system of the USSR State Committee for Vocational and Technical Education and also training and upgrading of skills of workers and employees.

In 1981, especially big attention is paid in labor statistics to the implementation of a number of records for the purpose of obtaining additional accounting data for an analysis of change in the number of workers, their education and vocational training. Counts will be taken of specialists with higher or secondary specialized education employed in the national economy; workers occupying positions of directors and specialists; the number of workers and employees in the national economy according to size of wages, sizes of established monthly wage rates and salaries.

In the study of questions of social development, an important place belongs to statistics of population, health care and social security. Systematic reporting will ensure in 1981 the analysis of the natural movement of the population--birthrate, deathrate, population growth and also its migration. Calculations will be made of the size of the urban and rural population by oblasts, krays and republics and the population size of individual cities as of the beginning of 1981 as well as a number of calculations on the size of the able-bodied population as of that date. There will also be continued the production and elaboration of reports on health care and social security of the population. The sex and age of structure is to serve as a basis for working up of mortality tables and computation of the population's average life span and also of fertility for 1979-1980.

For comprehensive observation of progress in the fulfillment of targets in the field of public education and culture, the statistical work plan provides for the production and elaboration of reports on adult education, preschool and school education and training, on the system of kindergartens and nurseries, various types of schools, coverage by these institutions of the respective population groups, availability of educators and pedagogs as well as progress of students. Statistical research will be continued on cadre training in the country within the system of secondary specialized and higher educational institutions, on qualified cadres in vocational and technical schools and specialized schools, work of scientific institutions and scientific personnel, first of all relating to questions of plan fulfillment of scientific-research work and introduction of their results in the national economy.

Significant data is produced from the working up of reports on the system and operation of cultural, art and press institutions. This year a census is being taken of organs of scientific-technical information and special scientific-technical libraries.

In systematic observation of change in the level of the population's material well-being, a big role belongs to trade statistics, which serves as a most important source of information on commodity turnover in the country. Appropriate reports will provide first of all an analysis of data on deliveries of basic food and nonfood goods via the market from state resources for the country as a whole and for union republics as well as an analysis of the stocks of these goods. As in former years, much attention is devoted in the plan to working out of balances of basic food and nonfood goods, the data of which characterize the sources of formation of commodity resources and their use as designated.

Direct sale of goods to the population and fulfillment progress of plan targets will be characterized by reporting data on the retail goods turnover of state and cooperative trade and also by sale of agricultural products at city kolkhoz markets. For a more developed analysis of the satisfaction of the needs of the population for different goods in dynamics based on the reports, indexes are computed of retail prices for a number of commodity groups, as well as a general index of retail prices of state, cooperative and kolkhoz trade.

In the trade statistics work plan, an important place is given to reporting data which characterize the quality of consumer goods entering the trade.

The work plan on statistics of housing, municipal and consumer services provides for the working up of reporting on plan fulfillment of the sale of consumer services to the population, progress of capital repairs of state housing, operation of city passenger transport and municipal services. There is planned a one-time selective survey of the quality and time of fulfillment of orders and level of service to the population by consumer-service enterprises as of 1 October 1981.

For statistical study of the well-being of the people, data will be obtained as before from materials of selective surveys of family budgets. These surveys, as is known, serve as a source of differentiated data on the material and cultural living level for social groups and strata of the population. Data on family budgets disclose the process of forming of the family income and its use according to social-economic criteria and, first of all, the average individual income; they make it possible to analyze certain tendencies and laws of change in the living standard.

In addition to the continuous budget surveys, there will also be conducted in 1981 a one-time selective survey of 310,000 families of workers, employees and kolkhoz farmers for the purpose of obtaining statistical materials on incomes of families and their housing, everyday and cultural living conditions.

In 1981 social statistics will be significantly enriched by materials of special selective surveys of the organization of socialist competition at industrial enterprises, the influence of labor collective on the formation of man, survey of the population's cultural level and vocational orientation of the youth.

The plan provides for the implementation in the course of the year of a number of important operations in the field of statistics of foreign countries. Their timely and qualitative fulfillment will provide a constant comparison of indicators of the development of the economy of the USSR and CEMA member-countries; it also will make it possible to characterize the advantages of the economic development of socialist countries compared to capitalist countries.

The solution of the tasks set for 1981 for statistical observation over the course of fulfillment of the State Plan of Economic and Social Development of the country under conditions of further development of the economic mechanisms demands the simultaneous solution of a whole series of methodological and scientific problems. The plan of methodological work for 1981 outlines first of all the further development of the state statistics system of indicators in such a way that it most fully characterizes the development of the country's economy, the influence of various social-economic factors on this development, the use of material, labor and financial resources, efficiency of production and production quality and the development of the socialist way of life.

There is planned the development of more than 100 major methodological themes. A review will be continued of a number of the most important instructions and directives for the compilation of reports and their elaboration in the light of the provisions of a number of normative acts adopted in fulfillment of the decree of 12 July 1979. The methodology and system of indicators of regional production complexes will be further developed. In fulfillment of the requirements of the aforesaid decree on the need of development within the framework of state plans of development of the country, the union and autonomous republics, krays, oblasts, cities and rayons, as well as ministries and departments, associations, enterprises and organizations of consolidated sections for the entire complex of measures in the field of social development, much methodlogical work is being done on the preparation of an appropriate system of indicators and recommendations for the analysis of data on social development at all levels of regional administration.

Among the most important, mention should be made also of work on improving the methodology of calculating the social product as well as computation of the real income of the population by union republics. A procedure will be developed of compiling an accounting balance of finance resources and expenditures for the country as a whole. Much attention is being devoted to work on improving the methodology of compiling the respective volumes of agricultural production in the USSR and the United States.

It is especially necessary to emphasize the methodology planned for development of a systematic study of the country's food complex, as was emphasized at the October (1980) Plenum of the CPSU Central Committee; questions relating to development of agriculture and it being served by sectors of industry, procurement, storage, transportation and processing of agricultural products and questions of development of the food industry and trade in food products have to be combined together.

The methodological and scientific work of sectorial administration and departments of the USSR CSA in the field of statistics will be supplemented to a significant degree in 1981 by scientific developments of the Scientific-Research Institute for the Planning of Computer Centers and Systems of Economic Information (NII TsSU SSSR) and the All-Union State Technological Planning Institute for Mechanization of Accounting and Computing Work (VGPTI TsSU SSSR).

Personnel of organs of state statistics, in fulfilling the plan of statistical and methodological work for 1981, will make a significant contribution to the solution of practical problems of the country's economic development in the first year of the 11th Five-Year Plan.

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GOSPLAN OFFICIAL DISCUSSES PLANNING METHODOLOGY

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/Article by Doctor of Economic Sciences V. M. Ivanchenko, chief of the Department for the Introduction of New Methods of Planning of USSR Gosplan: "Standard Procedural Elaborations of the Five-Year Plan"/

/Text/ The publication and national discussion of the draft plan of the CPSU Central Committee for the 26th CPSU Congress, "The Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990," are the most important stage of the preparation for the 26th CPSU Congress. The theoretical and practical importance of this document and its profundity are mobilizing the creative energy of the Soviet people for the solution of the urgent problems facing the national economy at the present stage of the building of communism.

Considerable space in this document is allotted to the improvement of management, the increase of the level of planning, the improvement of the methods of management and the style of work as the most important factors of the successful solution of the main problem of the 11th Five-Year Plan. The implementation of the measures elaborated by the party and the government on the improvement of the system of planning and the management of the national economy for the purposes of the more complete reflection of the objective needs of the economy of mature socialism should be completed in 1981-1985.

The implementation of the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality," which was adopted in conformity with the strategic goals of the 24th and 25th CPSU Congresses, is of paramount importance in the solution of these crucial problems.

The elaboration by planning organs, scientific organizations and departments of standard procedural documents from the standpoint of the comprehensive application of the provisions of the indicated decree of the CPSU Central Committee and the USSR Council of Ministers is a crucial stage in the matter of implementing the decree, on which the success of the work as a whole depends considerably. These standard procedural acts cover the main directions of the improvement of planning, capital construction and the increase of the effectiveness of capital investments, as well as the strengthening of the influence of economic levers, stimuli and the entire cost accounting mechanism on the achievement of high end results.

By the start of the work on the plans for 1981 and the 11th Five-Year Plan the preparation of all the standard procedural documents, which are necessary so that the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality," would receive a comprehensive interpretation in planning decisions, had practically been completed. More than 80 standard procedural acts were drafted, adopted and put into practice.

A number of decisions were made in development and supplementation of the named decree on such questions as: the improvement of the organization of accounting and the enhancement of its role in the efficient and economical use of material, manpower and financial resources; the interest for the use of bank credit under the new conditions; the fee for productive capital (the limitation of preferences); the regulation of the formation and use of noncentralized sources of the financing of capital investments, as well as on other directions of the enhancement of the role of monetary levers and financial and bank control in the implementation of the policy of economy and the increase of production efficiency.

The standard procedural elaborations, which are aimed at increasing the role and level of planning as the central unit in the management of the national economy, which is especially stressed in the draft plan of the CPSU Central Committee for the 26th party congress, reflect many new aspects in the drafting and fulfillment of the plans for the 11th Five-Year Plan and the long-range future to 1990. They are first of all the drafts of comprehensive goal programs on the solution of social, economic, scientific and technical problems; the assurance of the concentration of forces and resources on the fulfillment of the most important statewide programs, as well as the formation of the material and financial reserves necessary for the proportionate and balanced development of the economy.

The practical changeover to the elaboration of the long-term outlook, the five-year and annual plans as a unified whole on the basis of the precise regulation of the procedure of the interconnection and the dates of the compiling of each plan is of great importance.

Beginning with the 11th Five-Year Plan the elaboration of the five-year balances on manpower and financial resources and production capacities is to be carried out on the basis of advanced norms and standards with the use of economico-mathematical models and computers. The five-year plan is being drafted for the first time on the basis of control figures which are being established with respect to the most important indicators, limits and economic standards.

During the preparation of the 11th Five-Year Plan complicated procedural problems were solved in connection with:

the use in planning of new indicators--the increase of the net output; the proportion of output of the highest quality category; the standard of the expenditure of wages; the limits of capital investments; the technical level of production and the output; the economic impact from new technology;

the need to maintain during the entire five-year period in industry stable wholesale prices and in capital construction the estimated prices and rates for freightage;

the appraisal of the activity on the fulfillment of the five-year plan by a progressive total from the start of the five-year plan and on the fulfillment of the plan of the sale of products with allowance made for their delivery to consumers in accordance with concluded contracts.

Starting with the 11th Five-Year Plan the elaboration of comprehensive goal and other scientific, technical, social and economic programs, as well as programs of the development of regions and territorial production complexes is being carried out within the state long-range plans of economic and social development. This required fundamentally new procedural decisions.

The following three groups of standard procedural documents on the improvement of planning and the economic mechanism should first of all be examined from this standpoint:

the statutes, instructions and directions connected with the use of the new system of indicators and standards;

the statutes and directions which ensure the practical implementation of the new procedural principles and statutes and the new technological approaches in planning;

the statutes and directions connected with the enhancement of the role of intensive factors of economic growth, the implementation of the policy of economy, the better utilization of the production potential and all types of resources.

Such documents as: the Methods Instructions on the Procedure of Elaborating and Using in Planning the Indicator of the Net Output (Standard); the Methods Instructions on the Procedure of Determining the Long-Range Standards of the Wage Per Ruble of Output; the Methods Instructions on the Procedure of Planning and Recording the Increase of the Output of Products of the Highest Quality Category (the Main Statutes); the Directions on the Procedure of Determining the Indicator on the Reduction of the Use of Manual Labor in Industry When Drawing Up the Draft of the State Plan of Economic and Social Development for 1981-1985; the Directions on the Procedure of Forming the Limit of Workers and Employees and Reflecting It in Reporting and the Fulfillment of the Plan on Labor in 1980, are of particular importance in the first group of standard procedural documents.

As we see, the main provisions of the decree have already been reflected in the plan for 1980. This pertains first of all to the planning of the increase of the output of products of the highest quality category and the limit on the number of workers and employees, on the extension of the range of use of the indicator of the net output and on the standard planning of wages. In 1980 the standard of the wage per ruble of output was used in 8 ministries, in 1981 it has been established for 18 industrial ministries. The closer standard coordination of the amounts and dynamics of the wage fund, the indicators of the increase of production and labor productivity is thereby ensured.

The extensive use of the standard planning of the wage in many ways is governed by the preparation of sectors for the changeover to the indicator of the net output, which creates more stable conditions of the establishment of such standards.

The indicator of the standard net output has already been adopted at more than 2,000 enterprises of various sectors of industry. At present the evaluation of the results of activity according to this indicator is already been carried out in the sectors of heavy and power machine building, the Ministry of the Shipbuilding Industry, the Ministry of Machine Building for Light and Food Industry and Household Appliances, the Ministry of Machine Building for Animal Husbandry and Fodder Production and the Main Administration of the Construction Materials and Structural Components Industry of the Moscow City Soviet Executive Committee. After 1 January 1982 with the putting of new wholesale prices into effect the standard net output will become the main indicator of the economic mechanism in 38 sectors. On the basis of this indicator the dynamics, the growth rate of the effective output and labor productivity are determined, the wage fund is planned and the appropriate standards are established, the expenditure and crediting of the wage are controlled, the output-capital ratio and other technical and economic indicators are calculated. All the standards, which are determined in connection with the production volumes, are calculated according to the indicator of the standard net output, for example, the deductions from the profit for the unified fund for the development of science and technology, the contributions to the economic stimulation funds (where the increase of production is being stimulated).

The ministries and departments are obligated to ensure the economic substantiation of the plans of the standards of the net output, which are elaborated in the sectors, by eliminating every possibility of the distortion of their values. This also pertains to the standards for products and services, which are approved directly by them. It must not be forgotten that the standard of the net outut is the very same price (a part of the wholesale price).

In the Methods Instructions on the Procedure of Determining the Long-Range Standards of the Wage Per Ruble of Output it is emphasized that their affirmation in the five-year plan of ministries, associations and enterprises should be combined as much as possible with the use of the indicator of the standard net ouput for the planning of production and labor productivity.

The elaboration of the standards of the wage by years of the 11th Five-Year Plan is now being carried out. Experience shows that their stability will in many ways be determined by the quality of the substantiation of all the indicators of the plan, which should be coordinated with the standard of the wage. It is also important in practice to ensure the progressiveness and the technical substantiation of the norms of the expenditures of labor on the output of products with allowance made for the increase of its technical level, the introduction of the scientific organization of labor and structural changes. All the most important factors, which influence the changes of economic processes during the fulfillment of the five-year plan, have to be mastered.

The mechanism of the interconnection of the wage fund and the material incentive fund under the conditions of the use of standards of the wage, when the unused saving on the wage fund as against the established standard is transferred at the end of the year to the material incentive fund, is fundamentally new. And, on the contrary, with the overexpenditure of the wage fund the assets of the material incentive fund (within the limits of the saving of the wage fund, which was transferred to this fund during the preceding year) are allocated to cover it. The mechanism of the interaction of these two funds, which reflect the amount of pay, requires careful elaboration. The model statutes, methods and other standard acts have a number of stipulations for special conditions and still cannot take into account all the specific conditions of the activity of sectors and individual works. This is the task of sectorial standard acts.

The Methods Instructions on the Procedure of Planning and Recording the Increase of the Output of Products of the Highest Quality Category (the Main Statutes) hold an important place in the first group of standard documents. It is not simply a matter of increasing the output of products which have been awarded the State Seal of Quality, but of the planned improvement of the structure of the total volume of products being produced on the basis of the increase of the proportion of high quality products. The assignments on the increase of the proportion of products of the highest quality category are established in the form of the proportion of these products in the total volume of commodity production in comparable prices. The use of this indicator required the elaboration of a number of other standard documents. The decree of the USSR Council of Ministers of 11 December 1979, "On the Further Enhancement of the Role of the Certification of Industrial Output in the Increase of Its Technical Level and Quality," was adopted.

In this connection the appropriate refinements and changes were made in the prevailing statistical reporting. Under the new conditions the output not certified on the set date is included in the final data as output of the second quality category. The composition of the output not liable to certification is specified more clearly. The State Committee for Prices has approved the instructions on the procedure of establishing premiums on the wholesale prices for new highly efficient products and wholesale price discounts for output of the second quality category. The procedure of paying into the budget the amounts of the indicated premiums and discounts has also been specified.

The planning and stimulation of product quality under the conditions of the effect of the new standard acts were carried out in 1980 and are undergoing systems application in 1981 and during the five-year plan as a whole.

The limit of the number of workers and employees was established for the first time in the plan for 1980. Experience shows that under the conditions of the sharp decline of the growth of manpower during the current five-year plan and in the future to 1990, apparently, there is the need to establish specific penalties for exceeding the limits of the number, combining these penalties with stimuli of the saving of manpower resources.

The second group of standard procedural acts, which realize the new methods in planning first of all from the standpoint of the development and systems application of program-goal methods, the enhancement of the role of the social aspect of plans, the comprehensive management of scientific and technical progress and the increase of the efficiency of social production on the basis of its intensification, holds a special place.

A set of new principles is thoroughly revealed in the Methods Instructions on the Drafting of State Plans of USSR Economic and Social Development, which were approved by USSR Gosplan on 31 March 1980. The principles and methods of the substantiation of the proportions and the structure, the assurance of a balance, the coordination of all the sections of the five-year plan as a unified national economic complex in the sectorial, territorial and program respects are specified in it.

In the methods instructions there are 27 sections which contain for their most part new standard procedural approaches to the solution of questions of planning.

In the first section this pertains to the system of scientific and technical programs, which include scientific and technical comprehensive goal programs, programs on the solution of the most important scientific and technical problems, as well as to the programs of the comprehensive standardization of the most important types of products and to the creation of systems of intersectorial standards, the metrological support of the sectors of the national economy and others.

The planning of the main indicators of the technical level of production and the most important types of output being produced, which characterize the influence of the achievements of science and technology on the technical level of the means of production, the processing method of the output being produced, as well as the increase of the efficiency of labor, also received scientific methods support in this section. A precise determination of the economic impact for the national economy from new technology is given for the first time. In the methods instructions it is stated that the overall appraisal of the effectiveness of the scientific and technical measures included in the five-year plans is given according to the amount of the cumulative economic impact obtained in the national economy from the use of the achievements of science and technology.

The annual economic impact is the cumulative saving for the producer and user of new technology of all production resources (living labor, materials, capital investments), which the national economy obtains as a result of the production and use of new technology and which in the end takes the form of an increase of the national income.

The indicator of the increase of the profit (the reduction of the cost) from the output and use of new technology by years of the five-year plan is established on the basis of the determination of the annual economic impact. The overall cost accounting impact ($\text{Э}_{\text{х}}$) is defined as the difference between the total increase of the profit ($\Delta \text{П}_t$) from all the measures, which expedite scientific and technical progress, and the adjusted value of the total of the increase of the capital investment (ΔK) being planned for these purposes.

$$\text{Э}_{\text{х}} = \sum \Delta \text{П} - \text{Е}_{\text{н}} \sum \Delta \text{К}.$$

$\text{Е}_{\text{н}} = 0.15$ is the standard coefficient of the efficiency of new technology.

Substantial changes are envisaged in the second section, in which the system of indicators of the increase of the economic efficiency of social production and planning and the increase of the quality of industrial products is given. Here for the first time the reflection of the economic efficiency of new technology in the indicators of social production is shown, the indicators of the overall efficiency of foreign economic relations, evaluations of the intensity of plans and characterizations of different aspects of product quality are cited. A system of balances, which ensure the balance of all the physical and financial components of the plan, is given for the first time for five-year plans.

USSR Gosplan and USSR Gossnab have made more precise the products list for which the balances of material resources and their distribution should be drawn up within the plans of USSR economic and social development. During the 11th Five-Year Plan USSR Gosplan will calculate the material balances for more than 400 types of products (for each year of the five-year plan), of them plans of distribution among the main holders of capital will be compiled for the first time for 330 items. The elaboration of about 2,000 balances and plans of distribution is envisaged for 1981.

A new approach, with an orientation toward the end results of construction, the increase of the effectiveness of capital investments, their concentration and primary allocation for the technical improvement of production, is typical of the section on capital construction.

Many new principles have been elaborated on financial planning under conditions when the five-year plan becomes a tool of the cost accounting relations of ministries, associations, enterprises and organizations.

A special section is devoted to the planning of the improvement of the management of the national economy. Measures and indicators on the comprehensive implementation of the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality," are distinguished in the section.

A fundamentally new standard document, "The Main Procedural Principles on the Elaboration of National Economic Comprehensive Goal Programs," has been devised. The comprehensive goal programs are an integral part of the structure of long-range, five-year and annual plans in close coordination with the sectorial and territorial aspects. They give a planning decision of a major national economic problem with a complete description of the ultimate goals, the resources and the efficiency. The comprehensive goal programs will make it possible to coordinate the plan assignments more closely with the system of the effective management of their implementation and to ensure a comprehensive approach in the solution of the raised problem and the concentration of forces and resources. The comprehensive goal programs can have their own local temporary planning period within the system of long-range, five-year and current plans.

Our country has gained much experience in the elaboration of comprehensive goal programs. The importance of comprehensive programs in the management of the national economy was indicated in the reports of L. I. Brezhnev at the 24th and 25th CPSU Congresses. In the years gone by a number of comprehensive programs, which are of national economic importance, have been elaborated in conformity with the decisions of the congresses. It is possible to group with them the program on the development of the Nonchernozem Zone of the RSFSR, on nature conservation, the production of the latest computer hardware, the development of rail transport, public health and a number of others. The program method is becoming more and more widespread in the planning of science and technology. During the 10th Five-Year Plan more than 200 programs were elaborated and included in the State Plan of the Development of Science and Technology.

At the present stage the role of comprehensive program-goal planning is increasing more and more. Given the present scale of social production, the large number of sectors, large economic regions, territorial production and other complexes, the organizing importance of the plans at all levels of management is increasing. The task of improving the distribution of productive forces in the unified national economic complex of the country, which is set in the draft of the Main Directions, is acquiring paramount importance. The more effective combination of sectorial and territorial development is required, the need for the concentration of resources on the solution of major scientific, technical, economic, social and regional problems is increasing. In this connection it is very important to specify correctly for the five-year and longer period the directions of development, the priorities and the specific goals which have to be achieved, as well as efficient means and the effectiveness from their implementation. The comprehensive programs are also a tool of planning, by means of which the successful solution of the indicated problems is ensured in the plans.

However, it should be stated that the composition of the programs being elaborated does not meet in every way the requirements of the times. The quality of the programs and their economic substantiation, especially with respect to science and technology, need substantial improvement. The new thing consists first of all in the fact that the draft of the Main Directions sets the task to elaborate scientific, technical, economic and social comprehensive goal programs, as well as programs of the development of individual regions and territorial production complexes in conjunction with the appropriate sections of the plan, the material and financial resources and as the most important part of the state long-range plans of economic and social development. The point is that, first, a system of programs should be developed, and not just individual isolated programs; second, as the most important part of the state long-range plans the programs and their specific indicators should be fundamentally linked with all the sections of the plan and should be backed by the necessary resources. No later than 1.5 years before the start of the next five-year plan USSR Gosplan with the approval of the concerned departments or union republics should approve a list of the necessary programs, as well as the procedure and deadlines of their elaboration. Among the primary programs for the immediate future the elaboration of comprehensive goal programs on the most important national economic problems--the food program, the programs on the increase of the production of consumer goods and services, the reduction of the use of manual labor, the saving of fuel and metal and the development of the zone of the Baykal-Amur Main Rail Line--is being carried out in conformity with the Main Directions.

The established procedure of elaborating goal programs will make it possible to ensure the comprehensive solution of major national economic, intersectorial and regional problems and not to allow a narrow sectorial approach to the drafting of the plan, and this is one of the important directions of the further improvement of planning and management. Here it should be taken into account that the comprehensive programs, being one of the methods of the scientific substantiation of plans, function at the same time as an important means of the organization of their fulfillment.

Thus, the system of comprehensive programs serves as one of the effective levers of the increase of the organizing role of state and first of all five-year plans. Along with assignments and standards, which are set in the sectorial plans, an entire system of organizational and economic measures at various levels of management, which can be properly coordinated and practically implemented only by means of the program-goal method, is required for solving, for example, the problem of saving fuel. The situation with the program on the saving of metal is precisely the same. So far measures on the saving of fuel and metal have been elaborated within individual sectors or enterprises. Now the task has been set to elaborate comprehensive programs on a statewide scale as a component of the long-range plans of the economic and social development of the country. This will make it possible to specify more correctly in the plans the necessary capital investments, including the expenditures on measures on the saving of metal and fuel, which, as is known, is 1.5- to 2-fold more effective than the expenditures on the construction of new enterprises for the production of the corresponding amount of metal or fuel and energy resources.

Or let us take the problem of increasing the production of new consumer goods. Under the conditions of the continuous increase of the effective demand of the population in the socialist countries the market cannot be developed only by increasing the traditional consumer goods, although this is very important. The updating of the assortment of goods, especially cultural and personal items, should be of a constant and steadily increasing nature. But the expansion of the assortment not only within individual enterprises and sectors, but also on the scale of republics and the entire country, taking into account the need for the strengthening of intersectorial contacts and the solution of a number of problems on the state scale, is required for this.

The importance of intrasectorial programs is also increasing. The ministries and the councils of ministers of the union republics should draft and approve within the five-year plans the plans of the increase of the technical level of the sectors, stipulating in them programs on the solution of sectorial scientific and technical problems, as well as measures on the development, assimilation and introduction of new high quality machines and equipment, advanced technology and materials and on the increase of product quality. This means that the programs are becoming the most important part of the plan of the increase of the technical level of the sector. Accordingly assignments on the fulfillment of the scientific and technical programs, which are becoming mandatory to the same extent as other most important indicators of the five-year plan, are envisaged among the indicators being approved.

At the same time practical experience shows that a set of economic planning and organizational measures are required for the acceleration of scientific and technical progress and the increase of product quality. Along with the improvement of the methods of planning, the indicators of the plan and the economic stimuli it is necessary to create the organizational conditions and to increase the effectiveness of state monitoring of the development and introduction of new technology, as well as the output of high quality items. In this connection there should especially be pointed out the great importance of such measures as: the completion in the next two to three years of the formation of production and scientific production associations with the intensification of specialization and cooperation at them; the making stricter of the demands on State Standards; the systematic assessment of the technical level of the machines, equipment and other production technology, which is being produced; the making of an extradepartmental appraisal of the technical and economic indicators of items which are being produced and newly assimilated as well as the strengthening of the forms and methods of monitoring the technical level and quality of the output being produced. All these directions of planning and organizing work have already been backed by standard procedural documents. It is now only a matter of their practical implementation.

The adopted system of standard procedural documents also covers the most important questions of intensification, the policy of economy, the efficient use of resources and the production potential. Here there must also be noted such documents as the procedure of determining the intensity of plans, the Statute on the Passport of the Production Association (Enterprise), the system of progressive technical and economic norms and standards.

The drafting of stepped-up plans means, first, that in planning the criteria for the making of the optimum planning decisions must be clearly specified so that they would be, on the one hand, stepped-up (using all the production potentials) and, on the other, practicable from the point of view of the organization of their implementation. The system of scientifically sound progressive norms and standards functions as such criteria.

Under present conditions the enhancement of the role of intensive factors of economic growth is becoming a most important criterion of the intensity of plans, which in many ways is dictated by the level of the utilization of the effective production potential (production capacities), the increase of labor productivity, the qualitative characteristics of the output being produced, which appear among the national economic demands on production efficiency and work quality. Ahead lies the more thorough scientific elaboration of this problem on the basis of the generalization of the experience of using the methods instructions on the procedure of determining the intensity of plans with allowance made for the specific nature of sectors and works.

The task of elaborating the passports of production associations (enterprises) in conformity with the adopted statute on such passports also borders directly upon this problem. The elaboration of new passports of enterprises, in which the data on the availability and level of utilization of production capacities are specified, including the data on the equipment shift coefficient, the organizational and technical level and specialization of production and other technical and economic indicators, was completed in 1980. Such a passport will become the main criterion of the practicability and intensity of the plans of enterprises. At the same time this implies the creation of the conditions for the unity of the demands on the quality of the plan at all levels. Of course, the generalization of the first attempt at compiling such passports will make it possible to make further improvements in their structure.

We have already noted the importance of the system of norms and standards for ensuring the better balance and scientific substantiation of the plans. Now it must be noted that the system of progressive norms and standards is a decisive link in the drive for a policy of economy in the national economy. In the draft of the Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990 the task is set to implement a system of measures which are aimed at the more complete and economical utilization of all types of raw materials and resources, the reduction of losses and waste and the elimination of unproductive expenditures.

For the assurance of the scientific soundness of the programs and plans on the saving of resources, which are being elaborated, the quality of the norms and standards being used in planning must be increased on the basis of their elaboration according to the types of operations and the expenditures (saving) of labor, raw materials, materials and fuel and energy resources, the standards of the utilization of production capacities and the specific capital investments; the procedure of their elaboration and approval must be improved.

Norms and standards are also now being used in the practice of planning. The plan and the balances for material, manpower and financial resources were not compiled without them. But now, given the considerably greater demands on the balance of the five-year plans and the enhancement of the role of long-range planning, the importance of the system of progressive norms and standards, which are periodically refined with allowance made for scientific and technical achievements, as well as the changes in the volumes and pattern of consumption of products, has increased greatly. Only on the basis of such a system of norms and standards is it possible to complete during the 11th Five-Year Plan the adoption of automated planning estimates with the extensive use of the physical and value balances of the output and distribution of products, production capacities, manpower and financial resources.

The adoption of an automated system of planning estimates, which is based on the extensive use of modern computer hardware, economico-mathematical models and the system of norms and standards, will make it possible to draft plans in several versions, selecting from them the one which ensures the optimum solution of the outlined tasks.

The preliminary work has already been done so that starting with the plan for 1981 along with the assignments on the average reduction of the rates of consumption of material resources, including rolled ferrous metal products in machine building and metalworking, assignments would also be established on the overall specific consumption of metal, the decrease of the metal content of specific most important types of products in the physical indicators and the increase of the utilization ratio of metal. The necessary assignments on the preparation of these materials have been given to USSR ministries and departments.

Consequently, the improvement of the norms and standards is a necessary condition of the organization of planning, the saving of resources on the basis of economic and engineering estimates, the development and increase of the efficiency of the automated system of planning estimates. This is important at all levels of planning, including at associations and enterprises.

More than 50 standard procedural documents are connected with the most important directions of the improvement of the planning of capital construction, the increase of the effectiveness of capital investments and the development of the economic mechanism. The standard procedural acts on financial and credit activity are basically coordinated with these directions. A large group of these documents has been developed by the USSR Ministry of Finance, the USSR State Bank, the All-Union Bank for Financing Capital Investments, the USSR State Committee for Construction

Affairs and USSR Gosplan in connection with the changeover of construction to the planning and evaluation of the activity of construction organizations according to the end results of work on the basis of the establishment of stable limits of capital investments by years of the five-year plan and of assignments on the placement into operation of production capacities and facilities as the main indicator; in connection with the drawing up of standard title sheets and plans of the delivery of technological equipment for the entire construction period with allowance made for the norms of its duration and the implementation of the continuous financing of capital investments until the completion of the construction with the more extensive use of bank credit, as well as in connection with the changeover to settlements between the client and the contractor for enterprises, start-up complexes and projects, which have been completely built and turned over for operation.

Here the following must first of all be noted:

the instructions on the procedure of the use by the All-Union Bank for Financing Capital Investments and the USSR State Bank of the assets which are released from clients in connection with the changeover to settlements without intermediate payments as resources for the issuing of credit to contracting and planning and surveying organizations for covering expenditures on incomplete performance of construction and installation work and planning and surveying operations;

the instructions on the procedure of payments to banks of internal capital for the financing of state capital investments;

the instructions of the All-Union Bank for Financing Capital Investments on the procedure of settlements between clients and general contractors for operations on the installation of equipment for construction, which is delivered in complete sets;

the instructions on the procedure of forming and using the assets of the production development fund at production associations, enterprises and organizations of industry, at construction and installation organizations and planning and surveying organizations;

the instructions on the procedure of extending credit to scientific research, planning and design and technological organizations for expenditures on the incomplete performance of operations, as well as to ministries, departments and associations for operations which are financed through the assets of the unified fund for the development of science and technology.

A large and important group of standard procedural elaborations of the 11th Five-Year Plan is connected with the strengthening of the influence of economic levers and stimuli on the end results and work quality. They are called upon to ensure:

the changeover of the sectors of industry to the cost accounting relations of associations, enterprises, scientific research, planning and design and supply organizations on the basis of stable five-year indicators and economic standards (the wage, the distribution of the profit, the formation of stimulation funds, funds for the development of science and technology and other funds and payments);

the more complete orientation of economic stimulation toward the qualitative indicators of work and the better satisfaction of the needs of the users of the output being produced;

the development of a system of the stimulation of the increase of the output and sale of high quality products, the acceleration of scientific and technical progress, the increase of the interest of enterprises in the use in production of less expensive materials and substitutes (without the worsening of the quality characteristics);

the development and planned utilization of progressive forms of pay, the improvement of the system of rates in conjunction with the improvement of the organization of the norm setting of labor.

The gradual rearrangement of planning and the entire economic mechanism on the basis of the new standard procedural documents, which has as a goal the improvement of the proportions, structure and balance of the plans and the enhancement of the role of the intensive factors of economic growth, will be an important contribution of economic science and practice to the drafting of the optimum, balanced plans and the assurance of their unconditional fulfillment, the achievement of new great gains in the building of communism, which were outlined by the Communist Party of the Soviet Union in the draft of the Main Direction of USSR Economic and Social Development for 1981-1985 and the Period to 1990.

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PLANNING AND PLAN IMPLEMENTATION

BAYBAKOV REVIEWS CENTRALIZED PLANNING

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 2, Feb 81 pp 6-17

/Article by Deputy Chairman of the USSR Council of Ministers and Chairman of USSR Gosplan N. Baybakov: "Centralized Planning Is the Achievement of Socialism"/

/Text/ The 60th anniversary for the formation on the initiative of V. I. Lenin of the State Planning Committee--the organ of centralized planning--is on 22 February 1981. The decree of the Council of People's Commissars on its creation was signed soon after the adoption of the plan of the State Commission for the Electrification of Russia, which attests to the great importance which Lenin attached to the implementation of this first unified centralized plan of the building of the economy.

The anniversary of Gosplan comes on the eve of the most important event in the life of the Communist Party of the Soviet Union and all the Soviet people--the 26th CPSU Congress, which, as L. I. Brezhnev indicated, will determine the strategy and tactics of the struggle at the coming stage of the building of communism.

The economic and social policy, which will be elaborated at the party congress, will be embodied in the national economic plans, which are the organizing force in the solution of the problems advanced by the CPSU and in the progress of our homeland along the path to communism.

V. I. Lenin was the founder of the theory and practice of planning in the USSR. The principles of socialist planning, which he formulated, became the basis of the progressive development of the Soviet state. These principles were examined and substantiated by V. I. Lenin in the report at the Eighth All-Russian Congress of Soviets on 22 December 1920, which approved the plan of the State Commission for the Electrification of Russia, in his historic work "On the Unified Economic Plan," which was published in PRAVDA on 22 February 1921, and in other works. They specify the methods of the drafting of a unified long-term state plan, the concentration of forces and assets on the fulfillment of the main tasks, the scientific, technical and economic substantiation of plans, the fundamental combination of long-range plans with current plans, sectorial plans with territorial plans, and the lending to them of a directive nature and clear-cut address nature.

It is noteworthy that on the day of publication in PRAVDA of his famous article "On the Unified Economic Plan," the main theme of which is the defense of the plan of the State Commission for the Electrification of Russia, V. I. Lenin signed the decree on the creation of the State Planning Commission, which became a significant landmark in the history of the organization of the planned management of the national economy. The decree, in particular, specified that the State Planning Commission was entrusted with: the drawing up of a unified statewide economic plan, the methods and procedure of its implementation; the review and coordination with the statewide plan of the production programs and planning proposals of various departments, as well as oblast (economic) organizations for all the sectors of the national economy and the establishment of the order of priority of the work; of measures of a statewide nature on the development of the knowledge and the organization of research, which are necessary for the implementation of the state economic plan.

Following the formation of Gosplan planning organs were formed locally and in the sectors of the national economy.

Summing up the first steps in the area of the organization of planning, V. I. Lenin emphasized: "...We have now received an opportunity, which is rare in history, to establish the time necessary for the making of radical social changes, and we clearly see now /what/ /in italics/ can be done in five years and for what a much longer time is necessary."[1]

Guided by the instructions of the party and the government, Gosplan focused the main attention first of all on the drafting of plans which ensured the implementation of the plan of the State Committee for the Electrification of Russia. Their implementation made it possible already in 1925 basically to regain the prewar level of industrial production. The 14th party congress established the policy of industrializing the country and rapidly developing heavy industry, first of all machine building. The entire system of the planned management of the national economy, its forms and methods were subordinate to the solution of this main problem. In 1927 the 15th party congress adopted the Directives on the First Five-Year Plan for 1928/29-1932, in which the tasks of industrializing the country and changing over on this basis from small-scale individual agriculture to the large, collective farm which is supplied with modern equipment were fundamentally linked.

Thus commenced the five-year plans, which became the main form of long-range national economic planning.

In 1979 the Soviet people celebrated the anniversary of the First Five-Year Plan, which marked a new, higher stage in the practical implementation of Lenin's ideas of socialist planning. In the CPSU Central Committee decree "On the 50th Anniversary of the First Five-Year Plan of USSR National Economic Development" it is emphasized that the First Five-Year Plan showed the enormous advantages incorporated in the socialist system as compared with the capitalist system, confirmed the fundamentally new, consistently democratic forms and methods of the management of the national economy and aroused among the masses of many millions of workers great creative energy, which was embodied in socialist competition.

The results of the First Five-Year Plan, which was fulfilled ahead of time, amazed the world. Such cardinal problems as the building of the foundation of socialism

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1. V. I. Lenin, "Poln. sobr. soch." /Complete Works/, Vol 45, p 385.

and the assurance of the economic independence and defensive capability of the country were successfully solved. The volume of industrial output doubled during the five-year plan. New large sectors of industry--the automotive industry, machine tool building, the tractor industry, the aircraft industry, agricultural machine building and others--were created in the country. Major shifts occurred in the distribution of productive forces. The enormous natural resources of our country were committed to the economic turnover. New industrial centers were built in the eastern regions of the RSFSR and in the republics of Central Asia and Transcaucasia.

During the Second (1933-1937) and in part the Third Five-Year Plans major economic programs, which were aimed at the completion of the technical modernization of the national economy and the creation of the latest production base of all its sectors, were implemented according to plan. In the sections of the plan the emphasis was placed on the electrification of the economy and the accelerated development of machine building, ferrous metallurgy and the chemical industry.

The 18th party congress (1939) set the task of increasing the rate of the retooling of the national economy. Taking into account the danger of fascist aggression, which was being encouraged by the international reactionaries, the party and the government devoted much attention to the strengthening of the defensive potential of the country. The fundamental modernization of old aircraft, motor vehicle, tank and other plants of the defense industry was carried out and a considerable number of new ones were built.

The fulfillment of the prewar five-year plans ensured the solution of the major problem of the industrialization of the country and the socialist reorganization of agriculture. The exploiting classes and the factors giving rise to the exploitation of man were eliminated. New, socialist production relations, which allowed for the accelerated development of productive forces, became dominant. The Soviet Union was transformed into a highly developed industrial power with a solid material basis of socialism. The new mechanism of managing the economy according to a unified plan became firmly established in all the spheres of social production. All the Soviet republics made unprecedented gains in economic and cultural construction.

The implementation of the incomplete three prewar five-year plans provided a significant increase of production, first of all in the basic sectors:

	1928	1940
Electric power, billions of kWh.	5.0	48.5
Coal, millions of tons	35.5	166.0
Petroleum (including gas condensate), millions of tons	11.6	31.1
Finished rolled production, millions of tons	3.2	11.4
Machine tools, thousands	2.0	58.4
Forge and press machines, thousands.	0.1	4.7
Motor vehicle production, thousands.	0.84	145.4

During the hard years of World War II the advantages of the planned socialist economy appeared again especially strongly. The party and the government used state centralized planning as a mighty means of the organization in an extremely short period of a well-coordinated war economy, the rapid placement into operation of evacuated enterprises and the construction of new ones. Under the difficult conditions of the temporary occupation by the fascist invaders of a number of regions the Soviet people reliably backed the needs of the front with everything necessary. The strenuous efforts of the party and all the people were needed in order in a short time to heal the wounds of the war and to begin the restoration of the economy. Our Communist Party, relying as before on socialist planning, successfully solved the most important problems.

During that period USSR Gosplan drafted the long-range plans of the Fourth (1946-1950) and Fifth (1951-1955) Five-Year Plans. Their implementation made it possible to considerably exceed the prewar level of the economy and to begin the completion of the building of socialism and the gradual transition to communism.

The fulfillment of the subsequent long-range plans, which covered the period of 1956-1966, ensured an increase of the national income by nearly twofold and of the gross output of industry by 2.5-fold. The Soviet Union achieved major gains in the most important fields of science and technology, first of all in the study of space and the use of atomic energy for peaceful purposes, in the development of electronics, precision machine building and rocketry.

The organized developed socialist society and the strengthening of the social orientation of the plans were a characteristic feature of the Eighth, Ninth and 10th Five-Year Plans. This was the period of the implementation of the decisions of the October (1964) CPSU Central Committee Plenum and the 23d, 24th and 25th CPSU Congresses, which outlined the policy of ensuring stable rates of economic growth, of achieving a great efficiency of social production on the basis of scientific and technical progress, of using efficiently the production apparatus created in the USSR and manpower resources and of increasing the productivity of national labor as the basis of the increase of the standard of living of the Soviet people.

During the indicated years the production potential increased significantly, the number of skilled personnel increased considerably, their educational and occupational level rose, significant gains were made in the improvement of the material and technical base and the production relations of mature socialism and in the solution of a wide range of social problems.

In 15 years the fixed production capital increased more than threefold and by early 1981 came to 1.1 trillion rubles, and the proportion of the fixed capital newly placed into operation during the years of the 10th Five-Year Plan was about 40 percent. The national income used for accumulation and consumption increased during the past three five-year plans by 2.2-fold, while the output of industry increased by 2.7-fold.

Considerable attention during the period in question was devoted to the strengthening of the material and technical base of agriculture. Its fixed production capital grew by more than threefold. Large-scale operations on the implementation of the program of development of the Nonchernozem Zone of the RSFSR and the increase of the area of reclaimed lands were launched. An important step was taken in the direction of the development of animal husbandry on an industrial basis. The material and technical base of the sectors connected with agricultural production was strengthened. The sectors processing the products of agriculture were also developed. After the March (1965) CPSU Central Committee Plenum more than

325 billion rubles of capital investments were allocated for production facilities of agriculture alone, while with allowance made for the expenditures on the sectors, which directly ensure its development, the production of mineral fertilizers and means of protection of plants, tractor and agricultural machine building, machine building for animal husbandry and mixed fodder production, nearly 513 billion rubles were allocated, or more than one-third of their total amount for the national economy.

The rapid increase of the resources allocated for the mechanization, chemicalization and electrification of agriculture was achieved as a result of the industrialization of the country. The capital-labor ratio per worker in public agriculture in 1980 exceeded by approximately fourfold the 1965 level. The fixed capital of the sectors of the sociocultural sphere, especially available housing, increased considerably.

During those years the country began to work on a number of new national economic problems which are of great importance for the future period. An important step was taken in the development of the natural resources of Western Siberia, especially the deposits of petroleum and gas, the formation of a new mighty fuel and power base in the Kansk-Achinsk and Ekibastuz coal basins began. New territorial productions complexes are being formed. The Baykal-Amur Main Rail Line is being built and the initial stage of the economic development of the territory adjacent to it is being implemented. The material and technical base of nuclear power engineering was developed at a significant pace. Social problems are being consistently solved.

During the past 15 years the production volume of consumer goods has increased 2.5-fold. Their assortment has been updated, the quality is being improved. The real income of the population during this period almost doubled. The wage--the main source of income of workers--has increased steadily. The average wage of workers and employees increased during this period by 75 percent, while the average monthly pay of kolkhoz farmers increased by 2.3-fold.

In the past three five-year plans the payments and benefits, which the population has received from public consumption funds, will have been 1.2 trillion rubles. The retail commodity turnover in comparable prices will have increased by 2.5-fold, while the amount of personal services will have increased by nearly fivefold. The per capita real income will increase twofold. About 1.6 billion m^2 of total area of apartment houses have been put into operation. As a result 160 million people (60 percent of the population of the country) will have improved their housing conditions. At present 10-11 million Soviet people annually hold housewarmings.

Numerous skilled workers, specialists and scientists have been trained. With the number of those employed in the national economy in 1980 standing at 112.5 million, the country has 27 million specialists and nearly 1.4 million scientists.

From five-year plan to five-year plan our economy is rising to the heights which V. I. Lenin dreamed about. A society of mature socialism, a national socialist state, a mighty community of fraternal countries--these are the historic achievements of the economy of socialism, which is growing stronger on a planned basis.

This new stage in the development of our national economy is ratified by the USSR Constitution. It is indicated in it that the USSR economy has been transformed into a unified national economic complex which embraces all the links of social production, distribution and exchange on the territory of the country. Such an important achievement of the socialist economy as the combination of planned centralized management with the economic independence and initiative of enterprises and association is also ratified in the constitution.

The preliminary results of the fulfillment of the 10th Five-Year Plan, which will hold a worthy place in the history of the heroic deeds of the Soviet people, attest that the progress in USSR economic and social development continued during this period. The national income used for consumption and accumulation grew as compared with the Ninth Five-Year Plan by 400 billion rubles, industrial output increased by 717 billion rubles, agricultural output increased by 50 billion rubles. More than 1,200 large-scale industrial enterprises were put into operation. The average annual gross harvest of grain during the 10th Five-Year Plan exceeded 200 million tons for the first time. A new important step was taken in the solution of social problems.

Thus, the national economy of the country is arriving at the 11th Five-Year Plan with an economic, scientific and technical potential which ensures the further progressive development of the USSR during the planned period.

The Soviet people are embarking on the coming decade (1981-1990) fully resolved to make it a period of new great deeds and achievements.

The draft plan of the CPSU Central Committee, "The Basic Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990," in the preparation of which USSR Gosplan took a direct part, is a far-reaching program of the building of communism. In it the gains made in the development of Soviet society are reflected, the practical experience of building communism in the USSR is generalized, the strategy and tactics of the CPSU on the most important questions of economic and social development as applied to the specific conditions of the 1980's are embodied.

In 1981-1990 the party will consistently continue the implementation of its economic strategy, the highest goal of which is the steady increase of the material and cultural standard of living of the people, the creation of the best conditions for the all-round development of the individual on the basis of the further increase of the efficiency of all social production, the increase of labor productivity and the rise of the social and labor activeness of the Soviet people.

The further social and economic progress of society, profound transformations in the most important sphere of the vital activity of people--in labor, the improvement and facilitation of its conditions and the possibilities for highly productive and creative work will be ensured. Profound qualitative economic changes in the material and technical base are called for on the basis of: the intensification of social production and the acceleration of scientific and technical progress, the dynamic and balanced development of the economy as a unified national economic complex, the proportionate growth of all its sectors and the economy of the union republics, the raising of the organization of national labor and all production to a higher level, the concentration of forces and resources on the solution of the main national economic problems, the assurance of the stage-by-stage implementation of the comprehensive goal programs, first of all the food program, the development of the production of consumer goods and services, the reduction of the use of manual labor, the development of machine building, power engineering, transport and others.

The 11th Five-Year Plan, the main task of which is the assurance of the further increase of the well-being of the Soviet people, will be a crucial stage in the realization of long-range tasks, as is emphasized in the Basic Directions. Its implementation will be ensured by the progressive growth of the economy and the improvement of the structure of social production. The national income will increase during the five-year plan by 18-20 percent. The task is being set to ensure a faster growth rate of the output of the sectors of group B of industry as compared with the sectors of group A, to ensure the utmost development of the agro-industrial food complex and to implement major measures on the improvement of the quality of products and services in all the sectors of the national economy. Scientific and technical progress will be further developed on the basis of the pursuance in all the sectors of the national economy of a consistent policy of the more rapid retooling of production, the development and production of machines and equipment, which make it possible to improve the working conditions and to increase labor productivity, to save material resources, to develop and introduce in production fundamentally new equipment and materials and advanced technology.

The program of developing all the sectors of physical production is specified in the Basic Directions. The most important task of industry is the more complete satisfaction of the needs of the national economy for means of production and of the population for consumer goods. The output of industrial products will increase by 26-28 percent, the generation of electric power will be 1.55-1.6 trillion kWh, the production of petroleum, including gas condensate, will be 620-650 million tons, coal--770-800 million tons, the production of finished rolled ferrous metal products--117-120 million tons, the output of cement--140-142 million tons, mineral fertilizers--150-155 million tons, synthetic resins and plastics--6-6.25 million tons, chemical fibers and filaments—up to 1.6 million tons. The leading development of machine building and metalworking, the output of the products of which will increase by not less than 1.4-fold, is called for. The output of the products of light industry will increase by 18-20 percent, the food industry--16-20 percent.

The amount of goods for cultural and personal purposes and household use will increase by not less than 1.6-fold. Specific assignments on the production of goods for cultural and personal purposes and household use for the sectors of heavy industry are specified for the first time in the draft of the Basic Directions. Thus, in the radio industry it should increase by 1.7- to 1.9-fold, in the communication equipment industry--1.5- to 1.8-fold, the electronics industry--1.8- to 1.9-fold, the chemical industry--1.4- to 1.6-fold, the aircraft and motor vehicle industries, ferrous metallurgy and machine building--1.4- to 1.5-fold. This follows from the requirements of the Basic Directions, in which it is established to consider the growth of the production and the increase of the quality of goods for the population as a priority task of all the sectors of industry.

For the steady development of the economy it is necessary to ensure a materials-saving type of expanded reproduction by means of the extensive introduction in the national economy of advanced design decisions and the latest technological processes, the increase of the completeness of the use of raw materials, materials, fuel and power, the strictest policy of economy, the involvement in production of secondary resources and the utilization of waste products, the reduction of losses. At the same time much has to be done to pull up such basic sectors of the national economy as the fuel industry, ferrous and nonferrous metallurgy, the chemical and petrochemical industry, the timber and the pulp and paper industries. In this connection the need to change the structure of the pool of machinery and equipment and to develop and adopt new technology in the sectors which consume these products is becoming obvious.

Important tasks have been set for the agro-industrial complex, which should provide the country with foodstuffs and agricultural raw materials. Unified planning, the proportionate, balanced development of its sectors, the considerable strengthening of the material and technical base, the improvement of the economic ties among the sectors, the organization of their efficient cooperation on the increase of the output of agricultural products, the improvement of their keeping, transportation and processing and their delivery to consumers are called for.

During the five-year plan it is planned to increase the average annual output of agricultural products by 12-14 percent. Moreover, the average annual production of grain should be increased to 238-243 million tons, the average annual production of raw cotton--in the amount of 9.2-9.3 million tons, sugar beets--100-103 million tons, the average annual production of meat--17-17.5 million tons, milk--97-99 million tons, eggs--not less than 72 billion and wool--470-480 million tons.

The performance at a leading rate of the construction in the countryside of well-appointed apartment houses, children's preschool institutions, clubs and other cultural and general facilities is envisaged among the important tasks of the agro-industrial complex. The capital investments for these purposes will increase by 25-30 percent. The provision of rural population centers with centralized heat and gas supply, water supply and sewers will increase, the scale of construction of intrafarm hard-surface roads will be expanded, the retooling of all agriculture will be continued.

The Basic Directions in the development of transport, which should meet most fully and timely the needs of the national economy and the population for transportation, have been specified. It is envisaged to improve the coordination of the operation of all types of transport and their cooperation with other sectors of the national economy and to adopt a more improved technology of transportation in mixed traffic. In rail transport it is planned to carry out retooling, to increase the carrying and traffic capacity of the roads. New railroad lines will be put into operation, train traffic will be opened over the entire length of the Baykal-Amur Main Rail Line, the accelerated development of the network of main highways and the considerable expansion of the construction of roads in rural areas are envisaged.

A large construction program will be implemented during the 11th Five-Year Plan. For this it is planned to increase the capital investments in the national economy by 12-15 percent. The fixed capital in all the sectors of the national economy will increase. A feature of the program of capital construction during this five-year plan is the fact that the fixed capital will be allocated first of all for the renovation and retooling of operating ente[illegible]s, which will make it possible to obtain a rapid and high return from the created production potential. New construction will also continue, but, as was stated in the Basic Directions new capacities will be built only if by means of the complete utilization of the operating capacities it will be impossible to meet the needs of the national economy for one type of product or another. At the same time the maximum concentration of resources at start-up projects is called for.

In conformity with the program territorial production complexes will be formed, particularly in the regions of Siberia and the Far East, which are rich in raw material resources. The further development of these and other complexes is making it possible to improve the use of mineral deposits.

During the 11th Five-Year Plan the distribution of productive forces should be improved by the specialization and proportionate development of the economy of the union republics and the economic regions in the unified national economic complex of the country. In all the union republics the progressive development of their economy will be carried out. At the same time a more rapid increase of the economic potential is being planned in the eastern regions of the country.

During the new five-year plan the further increase of the national well-being and the development of the socialist way of life are envisaged on the basis of the development of the economy. These problems will be solved by the increase of the efficiency of social production and the productivity of national labor (by 17-20 percent). A more rapid increase of productivity is planned in a number of sectors: in machine building and metalworking--by 31-35 percent, in the gas industry--by 33-35 percent, in the chemical industry--by 28-30 percent, in electric power engineering--by 18-20 percent, in the food industry--by 21-23 percent and in the meat and dairy industry--by 27-29 percent. Economic levers will be used more and more effectively: the wage of each worker should depend to a greater and greater extent on the end results of work. In this connection the task is set to achieve a significant improvement of labor discipline, order and organization at the works and the further development of socialist competition.

The main assignments, which are contained in the draft of the Basic Directions, will be embodied in the five-year plan being drafted for 1981-1985, the implementation of which will ensure the further increase of the economic potential of the country, the increase of the national well-being and the maintanence at the proper level of the defensive might of the Soviet state.

The building of socialism, V. I. Lenin indicated, is "the building of a centralized economy, an economy from the center."[2] Our party has always proceeded from these founding ideas of V. I. Lenin when organizing the management of the national economy. At the October (1980) CPSU Central Committee Plenum L. I. Brezhnev emphasized that for the unified national economic complex there is no and can be no alternative to centralized management. Only at the national economic level is it possible to best solve the major problems of the improvement of the proportions, the structure and the balance and to pursue purposefully the socio-economic policy of the party.

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[2] V. I. Lenin, "Poln. sobr. soch.," Vol 37, p 422.

At the same time it is necessary to consider that the scale of the economy, the dynamism of scientific and technical progress, the needs and conditions of development require quick and efficient actions in management so as not to lose touch with the realities of life. That is why at the same time as the improvement of centralized planning the party is carefully and consistently implementing and developing the main principle of organization and management--the principle of democratic centralism.

"...Ahead of us," L. I. Brezhnev emphasized, "lies much work. During the 1980's the changeover of the economy to the path of intensive development should be completed, the productivity and quality of labor should be increased sharply. The increase of the level of economic work and the cultivation among personnel of efficiency, responsibility and initiative remain an indispensable condition of production success."[3]

A system of measures on the improvement of the economic mechanism, the style and methods of management and the improvement of planning, which, in particular, provides for: the improvement of the quality of the elaboration of a system of interconnected long-term and current plans, the enhancement of the role of program-goal planning and comprehensive programs on the solution of important scientific, technical, economic and social problems; the assurance of the optimum combination of sectorial and territorial planning; the more thorough elaboration of social problems, is now being implemented.

These and other measures are called upon to ensure the improvement of the proportions and balance of the plans, the increase of the efficiency and quality of work, the efficient use of the entire existing potential and all the resources of the national economy so that the high end results and the more complete satisfaction of the growing social and personal needs would rest on factors of the intensification of production, the achievement of the development of science and technology and the use of advanced know-how. Here the improvement of planning should find reflection in the development of a system of balances, the improvement of indicators and the adoption of advanced norms and standards.

The stage-by-stage complete implementation of the provisions of the decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of planning and the entire economic mechanism is planned during the 11th Five-Year Plan.

Ministries and departments, associations, enterprises and organizations in their proposals for the draft of the Basic Directions of USSR Economic and Social Development for the 11th Five-Year Plan called for comprehensive measures on the perfection of planning, the improvement of the organizational structure, the development of the concentration and specialization of production. Already in 1981--the first year of the five-year plan--34 ministries and departments will complete the preparation for the changeover on 1 January 1982 to the use in the planning of industrial production of the indicator of the standard net production. Beginning in

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[3] L. I. Brezhnev, "Rech' na Plenume Tsentral'nogo Komiteta KPSS 21 oktyabrya 1980 goda" /Speech at the CPSU Central Committee Plenum on 21 October 1980/, Moscow, Politizdat, 1980, p 13.

1981 12 ministries are converting to the standard planning of the wage, 49 ministries will complete the changeover of production associations (enterprises) to direct long-term economic ties and will ensure the drawing up and use in planning of passports of enterprises.

The brigade form of the organization of labor and wages is being extended by 25 ministries. As a result the proportion of workers working in brigades will come to 70 percent at the enterprises of these ministries.

The extensive use of the comprehensive system of the organization of labor, production and wages, which is used at the Volga Motor Vehicle Plant, the method of combining occupations, as well as comprehensive systems of product quality control is called for.

This year 41 ministries plan to complete the formation of production associations as the main cost accounting unit, to carry out the specialization and cooperation of production and the centralization of auxiliary and subsidiary services, as well as the improvement of the administrative functions of the associated enterprises and organizations.

The changeover of construction and installation organizations to the planning of the commercial construction output and settlements between the client and the contractor for enterprises, start-up complexes, sections and projects, which have been entirely completed, turned over for operation and prepared for the output of products and the rendering of services, will be completed in the construction ministries. The drafting of general plans of the management of construction will also be completed.

However, in a number of instances the outlined measures of the ministries are not always backed by the proper organizing work on the implementation of the made decisions, by the improvement of the style and methods of management as applied to modern conditions, by a significant increase of practicality and efficiency in the functioning of the staff and by the corresponding reorganization of the management of associations and enterprises. The improvement of planning and the entire system of management is carried out in some instances in isolation from the drive for the increase of production efficiency and from the punctual and unconditional fulfillment of the plans of economic and social development.

The activity of USSR ministries and departments, the councils of ministers of the union republics and the executive committees of the local soviets of people's deputies on the improvement of territorial planning and the assurance of the coordination of the sectorial and territorial plans requires serious improvement. The means of solving these problems are indicated in the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979.

In recent years the general plans of the management of the sectors of industry have played a positive role in ensuring the economically expedient concentration and specialization of production. Substantial changes have occurred in the organizational structure of management. On the basis of the implementation of the general plans of the management of the sectors of industry during the years of the 10th Five-Year Plan the number of production and scientific production associations exceeded 4,000 (there were 2,300 at the beginning of 1976). They account for almost half of the industrial output, which is twofold greater than its volume at the beginning of 1976. In a comparatively short period production associations have occupied a secure place in our industry. They are becoming to a greater and greater extent the main link of production.

For the planned improvement of the established production associations a number of ministries (the USSR Ministry of the Electrical Equipment Industry, the USSR Ministry of Tractor and Agricultural Machine Building, the USSR Ministry of Light Industry, the Ministry of the Lumber and Paper Industry and others) have organized the elaboration and implementation of the plans of their further development and retooling. Experience has shown that the implementation of such plans makes it possible in a short period to increase the production volume considerably without the enlistment of additional manpower, to increase labor productivity and to improve markedly the other technical and economic indicators with a high output-capital ratio. This experience in the work of the indicated ministries should be made accessible to all the sectors of industry.

It is necessary to continue the development of the network of scientific production associations as an important means of the improvement of the management of scientific and technical progress, the further retooling of production, the development of new technological processes, new materials and tools of labor and the assurance of a considerable shortening of the "research-production" cycle. The work on the concentration of the sectorial scientific research potential and on the elimination of duplication in scientific development should be stepped up, the composition and structure of scientific production associations should be specified, small and inefficient scientific organizations and laboratories should be consolidated and the use of scientific personnel should be improved, so as to subordinate the solution of scientific and technical problems to a greater extent to the changeover of the economy to the path of intensive development.

Work has been organized on agro-industrial integration and interfarm cooperation in agriculture in conformity with the decree of the CPSU Central Committee and the instructions of L. I. Brezhnev. Work has begun on the improvement of the organizational structure in nonproduction sectors, such as trade, housing and municipal services, the cultural and personal service of the population. This is making it possible to delimit more clearly the spheres of responsibility, to expedite scientific and technical progress, to reduce the number of levels in management, to bring sectorial and territorial organs of management closer to production, to solve promptly and with high quality the problems of the further development and improvement of production and services.

The principles of socialist planning are being used extensively throughout the world socialist system, especially in the CEMA member countries, where along with the coordination of national economic plans socialist economic integration has undergone development. A number of comprehensive goal programs have been drawn up within CEMA, and long-term agreements on the specialization and cooperation of the production of the USSR and the CEMA member countries have also been concluded.

In marking the 60th anniversary of Gosplan and Lenin's decree on its creation, the workers of planning organs fully realize the great and responsible tasks which the party and the government are assigning to them with respect to the embodiment in the plans of the economic policy of the CPSU. However, it should be acknowledged that the activity of USSR Gosplan does not completely conform to the increased demands and tasks of the development of the economy at the present stage, planning is being improved slowly, the most important problems of the national economy are not always elaborated thoroughly and comprehensively, the monitoring of the progress of the fulfillment of the plans is being poorly implemented and proposals on the prevention of arising bottlenecks in the development of individual sectors are not always drawn up in good time.

The national discussion of the draft plan of the CPSU Central Committee, "The Basic Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990," attests to the enormous possibilities in all the spheres of economic and cultural activity.

The workers of central and local planning organs, ministries and departments, associations and enterprises need to thoroughly comprehend the unsolved economic, technical and organizational problems and to find the optimum approaches to their solution, combining, as the party teaches us, great responsibility with initiative and creative boldness.

When drawing up suggestions for the detailed five-year plan with a breakdown by years at all levels of management it is necessary to provide for the economical consumption of material, manpower and financial resources on the basis of the improvement of the organization of production and labor, the tightening up of labor discipline and the considerable reduction of losses so as to take into the fullest account in the plan all the components which promote the increase of efficiency.

The USSR ministries and departments and the Gosplans of the union republics have much to do in the area of the increase of the validity of the proposals being drawn up, the improvement of the intrasectorial proportions, the drawing up of material balances, the concentration and specialization of production, the allocation of capital investments first of all for the renovation and retooling of operating enterprises and the most complete utilization of the operating production capacities.

Measures are presently being implemented on the improvement of the organization of the work of USSR Gosplan and the enhancement of its role in the system of organs of state administration. USSR Gosplan should elaborate more thoroughly the drafts of the plans of economic and social development, goal programs and the most important long-range problems of the development of the economy. On the basis of the Main Directions it is called upon when drafting the plan of the 11th Five-Year Plan to ensure the concentration of forces and assets in the decisive sectors, on the utmost development of the basic sectors of the economy, the improvement of the distribution of productive forces, the increase of the balance of the indicators being planned and the improvement of the proportions. USSR Gosplan has to increase the level of balance sheet and economic synopsis work, to improve the methodology and organization of planning, so as to ensure a more comprehensive approach which rules out the possibility of the appearance of departmentalism in planning, and to improve the coordination of the activity of the Gosplans of the union republics, USSR ministries and departments. The progressive ideas of modern science and the most efficient achievements in the field of technology, which can make an even more significant contribution to the increase of the efficiency of social production for the purposes of the more complete satisfaction of the needs of the workers, should be embodied in the five-year plan.

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INVESTMENT, PRICES, BUDGET AND FINANCE

VARIOUS ASPECTS OF CREDIT PLANNING REVIEWED

Moscow DEN'GI I KREDIT in Russian No 12, Dec 80 pp 28-34

[Article by V. I. Solovov: "Certain Questions of Credit Planning"]

[Text] The realization of the measures envisaged in the Decree of the CPSU Central Committee and USSR Council of Ministers of 12 July 1979 "On Improving Planning and Strengthening the Effect of the Economic Mechanism on Raising Production Efficiency and Work Quality" to improve national economic planning also requires a corresponding improvement in credit planning. In this regard it is advisable to review certain problems of credit planning the solution to which would help in successfully carrying out the tasks in the area of credit management. Among these problems are: the compiling of a summary credit plan for the nation, consolidating the objects of planning for short-term credits, including short-term credits and debtors and creditors in the nomenclature of the enterprise financial plans, more actively involve the bank divisions and offices in credit planning and on this basis ensure an organic combining of the sectorial and territorial aspects of credit planning. These problems at various times have been taken up in the press,[1] however in our view, they still have not been properly settled.

The present system of credit planning is characterized by the presence of independent plans of two credit institutes, the USSR Gosbank and the USSR Stroybank. A summary credit plan, as a document which unites the plans of both banks and would characterize the state of the money funds accumulated by the credit system and their use is not compiled and not approved. This circumstance, in our opinion, weakens the level of managing credit relationships in the economy. For this reason the working out of a national summary credit plan represents one of the urgent tasks of credit planning.

The solution to this problem has two aspects. The first concerns the summary plan of long-term crediting compiled from the volume of long-term credits extended and the accumulation of resources for covering these grants, and the second is the compiling of a summary credit plan which would characterize the credit resources and their placement at a certain date (end of a period).

The formation of a summary long-term credit plan could be carried out comparatively easy, since the USSR Gosbank and the USSR Stroybank work out these plans using the same procedures and at the same dates. In this regard for compiling a summary plan it is merely a question of entrusting one of the state bodies with the duty of totaling the indicators of the draft plans of both banks. The USSR Gosbank could be such a body as it is responsible for around one-half of the long-term credits granted during the year.

The summary long-term crediting plan could be approved in the following form:

(million rubles)

Plan Items	Total for USSR	Including	
		For USSR Gosbank	For USSR Stroybank

With such a form there is no necessity of the separate approval of plans for each of the banks, as is done presently, and at the same time each of the banks will have, in essence, its own plan for all the indicators. This will ensure the independence of their actions in the process of carrying out the plan.

The second aspect of the problem is determined by the fact that the plans of the USSR Gosbank and the USSR Stroybank which reflect the balances of money and bank credits differ both in terms of periodicity and in terms of their content. The USSR Gosbank draws up quarterly credit plans which record all the money on account at the Gosbank, including the funds for long-term crediting and all credit liabilities, including long-term credits. The USSR Stroybank draws up annual (with a quarterly breakdown) short-term crediting plans which reflect liabilities only for short-term credits and the funds earmarked for covering only the short-term credits.

Considering what has been stated, for compiling a summary credit plan which would describe the volume of credit resources and their placement, it is essential to eliminate the designated differences. The standardizing of plan periodicity can be achieved on the basis of converting the Gosbank to the compiling of credit plans for a year with a quarterly breakdown. The proposals for the compiling of credit plans of the USSR Gosbank with annual periodicity are gaining ever-broader support, and their realization (with the corresponding broadening of the rights of the USSR Gosbank in the area of maneuvering the credits and resources within the year) would make it possible to substantially reduce labor expenditures on credit planning.

As for the contents of the plans, we feel that the nomenclature of the items in the plan of the USSR Stroybank should be supplemented and brought into conformity with the contents of the USSR Gosbank credit plan, that is, it should include the long-term credits and the resources for covering them (in terms of the balance of liabilities at the end of the period being planned). Such a supplement would make it possible to standardize the contents of the plans of the USSR Stroybank and the USSR Gosbank. As a result of this the compilation of a summary credit plan would require the carrying out of just a series of organizational measures such as settling the question of the body responsible for compiling the summary plan and the procedure for the submission of draft plans from the individual banks.

In our view, the compilation of a summary credit plan could be entrusted to the USSR Gosbank which is the credit, payment and emission center of the nation.

USSR Gosbank is responsible for around 90 percent of the short-term credits granted by banks to the national economy and it accumulates a predominant share of the increase in the nation's loan funds during the period being planned. The USSR Gosbank also has definite experience in compiling summary plans, as the present Gosbank credit plan is, in essence, a summary of the plans of the institutions of the USSR Gosbank and the USSR Gostrudsberkass [State Labor Savings Bank].

In order that the USSR Gosbank have the conditions for compiling a summary credit plan for the nation, it is essential that the USSR Stroybank submit a draft of its credit plan to the USSR Gosbank 10-15 days before the date the USSR Gosbank is to submit the draft of the national summary credit plan to the USSR Council of Ministers for the USSR Gosplan.

The national summary credit plan could be submitted and approved in the following form:

(million rubles)

Plan Items	Balances at end of planned period		
	Total for USSR	Including	
		USSR Gosbank	USSR Stroybank

The compiling of the plan in such a form would substantially increase the importance of the information contained in it and would create conditions for the sounder taking of decisions in the area of managing the national monetary and credit system.

The Decree of the CPSU Central Committee and USSR Council of Ministers of 12 July 1979 "On Improving Planning and Strengthening the Effect of the Economic Mechanism on Increasing Production Efficiency and Work Quality" states that the USSR Gosbank and the USSR Stroybank are to submit to the USSR Gosplan the calculations of short- and long-term credits for the 5 years (with a yearly breakdown). The submission of such calculations by the banks requires the preliminary compilation of a balance of credit resources and their utilization, since the credit operations of the banks are related to the funds accumulated by them from the economy and the public. Under these conditions the task of coordinating the indicators in the plans of the USSR Gosbank and USSR Stroybank assumes particular significance in the drawing up of the five-year plans. The USSR Gosbank, in accumulating a predominant share of the increase in credit resources, in their distribution should consider the requirements of the USSR Stroybank for credit resources, and for this reason the obtaining of calculations by the USSR Gosbank from the USSR Stroybank becomes objectively necessary, including for a correct approach to planning credits for the organizations served by the USSR Gosbank.

For the present level of credit planning in the USSR Gosbank, with the satisfactory quality of the fulfillment of the plans in terms of the total volume of credit liabilities (the deviations from the plan do not exceed 2-3 percent), one does observe substantial deviations from the plan in terms of individual indicators, and primarily for short-term loans broken down for the individual crediting projects. These deviations, in our view, to a significant degree are caused by the excessive breaking up of projects for the planning of short-term credits (up to 50 items). And for certain projects the volume of liability reaches scores of billions of rubles while others run in millions of rubles. A predominant share of the projects is for credits for material and commodity stocks.

The multiplicity of projects for credit planning for material stocks, in our view, impedes a high-quality compilation of calculations for the plan by the economic organizations and reduces the opportunity of bank control in reviewing the credit applications of the economic organizations. At present, for example, the production stocks of raw materials are credited as ordinary above-norm production stocks (credit code 11), as stocks related to the production of new products and superior quality products (credit code 10), as stocks related to the development of new machines and equipment with a manufacturing period of more than a year (credit code 16), as above-planned, surplus and unnecessary materials (credit code 18) and can also be covered by payment and other credits.

In terms of credits for material stocks there is a preferential system for the redistribution of credit limits making it possible to credit certain goods at the expense of limits on other projects granted for the given enterprise or other enterprises, including enterprises under different ministries and departments, if the limits are not used by them.

Naturally, doubt arises as to the advisability of such a procedure for the planning of short-term credits as it has little effect on the process of crediting material stocks but requires significant labor expenditures. The latter arise out of the expenditures on calculating the movement of material stocks for each specific project, for summary work in the compiling of the plans and the calculations for them, on the working up of the plans and the subsequent drawing up of a redistribution of the credit limits. It must be kept in mind that out of the above-named 50 items of the credit plan for short-term credits, around 40 are distributed between the ministries and departments. The number of projects relating to the economic bodies of a single ministry varies from 4 to 30. Since the economic organizations and their superior bodies, the divisions, offices and sectorial credit administrations of the Gosbank Board are involved in the planning of short-term credits and each individual line in the plan requires working through on all levels, all of this complicates and slows down the process of summarizing and analysis. Under the conditions of limited time for the compiling of the plan, this tells on the quality of the plans. The multiplicity of crediting projects entails an increase in the amount of accounting work both at the bank and for the economic organizations (for each crediting project an independent accounting document is kept in the form of a personal account at the bank and a subaccount for the economic organizations. At present in accounting the short-term loans are distributed over almost 70 crediting projects).

In our view, one of the main reasons for the large number of crediting projects is the absence of a comprehensive, systematic approach to the organization of crediting. In introducing new crediting projects, they usually are given a new code in the bank accounting and reporting without proper regard to the possibilities for placing the security for these projects in the enterprise balance sheets.

The classification of the short-term crediting projects should correspond to the aims and tasks of credit planning.

One of the aims of credit planning is to meet the needs of the national economy for payment funds sufficient for uninterrupted payments for the products and for other obligations stemming from the national economic development plan and the USSR State Budget. The achieving of this goal should be provided on the basis of the rational use of the material, labor and financial resources. The interests of the national economy require the carrying out of reproduction with minimum stocks, and characteristic of the interests of the enterprises is a desire to ensure themselves against the "vicissitudes of fate" and have more stocks. The contradiction of these interests is resolved also through credit relations and here the bank is entrusted with control over the observance of national economic interests.

The instrument for controlling a rational structure of inventories is their norming and the procedure for the forming of inventories which exceed the rate covered by their own or equal assets. The dividing of working capital into normed and unnormed is one of the important conditions which should be considered in determining a rational structure for the crediting projects.

Within the normed working capital there are funds which directly influence monetary circulation. These are the finished products and commodities. For this reason the bank (and the national economy as a whole) is not indifferent to the structure of normed assets in terms of their physical and material composition. The working capital can include commodity stocks which are not needed at all by their holder or which exceed a no way justified demand. The bank must detect such assets and force the enterprise to rapidly put them into production or sell them on the outside by not crediting them or by granting credit under special conditions (at an increased rate and in the presence of measures elaborated to turn over the assets).

The designated particular features in the structure of normed working capital lead, in our view, to the conclusion that the following groups of material commodities can be established as the object of credit planning:

a) Production inventories;

b) Incomplete industrial production;

c) Incomplete agricultural production;

d) Incomplete production in construction, in design, scientific research and other organizations;

e) Finished products and commodities;

f) Assets at enterprises which receive turnover credits;

g) Surplus, unnecessary or idle assets (above-plan inventories not credited by the bank under ordinary conditions).

As for the unnormed working capital, here the basic object of crediting is the commodities dispatched to purchasers and work turned over to clients. These assets are covered by credits for payment documents enroute and these credits are an independent item in the summary credit plan.

As for credits not directly related to material supply, a consolidation of an object of planning is scarcely required.

As one of the solutions to the question of consolidating the objects of planning, it has often been proposed that the aggregate demand for borrowed funds be determined, that is, the reduction of these funds to one object. We find such an approach premature. The interests of strengthening monetary circulation require a qualitative description of the demand for credit, and this is not achieved with just one object of planning. If in a plan the entire demand for credit is shown in one line and the breaking down of the factors causing this demand is given in the calculations for the plan, in practical terms this is tantamount to the expenditures on planning according to a multiplicity of individual objects.

In adopting the above-given considerations on consolidating the objects of credit planning for material commodities, the total number of projects for which short-term credits should be distributed in the credit plans can be substantially reduced and brought down to 15-20 (the above-named 7 objects for credits for material commodities and production expenditures, plus credits: for bills enroute; for making up a shortage of working capital; for temporary needs; for paying wages; for paying for bills for goods, services and completed work; for temporary gaps in the sources of forming individual funds and expenditures from these funds; deferred payments; overdue and certain others).

The consolidation of the objects of short-term credit planning can have a number of positive consequences. These are:

In the first place, an improvement in the link of the objects of credit planning with the bookkeeping data at the enterprises which use the credit. This facilitates the planning process; indirectly this also tells on improving matters in the norming of working capital;

Secondly, a reduction in the amount of technical work related to the compilation of credit plans by the employees of the economic organizations and the bank. As a consequence of this the time is freed of highly-skilled bank and management specialists and this can be used for creative work in analyzing the processes and results of the movement of monetary resources, control on the spot from a general state standpoint over the rational utilization of material, labor and financial resources and so forth;

Thirdly, conditions are created for improving the quality of short-term credit planning, and in addition labor expenditures are reduced on the redistribution of the limits in the divisions, offices and sectorial credit administrations of the Gosbank Board;

Fourthly, there is a substantial reduction in the volume of operational accounting in the banking institutions in accounting for loan operations and reporting on them; this will create important prerequisites for reducing the time required to draw up reporting on short-term crediting in the national economy (at present, in line with the large amount of information for working out reporting on liabilities for short-term credits this takes up to 10-14 days even with the use of electronic computers) and an improvement in credit management on the basis of the use of this reporting.

The consolidation of the objects of planning does not exclude, however, the establishing of additional objects in planning or in operational reporting, in the event of particular need, but this should be an exception to the rules and serve specific goals of managing credit relations.

In light of the demands stemming from the Decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, the importance of the entire system of financial and credit planning has grown. The calculations drawn up by the banks on short- and long-term credits should correspond to the feasibility studies, and in line with this the economic bodies (ministries, departments as well as the associations and organizations) should submit to the banks the necessary calculations on the need for credit. The measures envisaged in the Decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 to improve planning work in the national economy create sufficient prerequisites so that the economic bodies can calculate the need for borrowed funds, that is, bank credits, as well as plan the state of their monetary resources for the coming annual or 5-year period. In particular, this has been aided by such measures as: keeping wholesale prices in industry, estimated prices in capital construction and rates for freight shipments stable over the 5-year period; setting economic rates, including rates for the wage fund and economic incentive fund; the changeover to assessing the fulfillment of the five-year plan on all levels of economic management in a running total from the start of the five-year plan, and the fulfillment of the annual plan in a running total from the start of the year; establishing in the plans relationships with the budget for budget payments and allocations from the budget; approving limits for state capital investments and so forth.

Since the demand for borrowed funds is determined considering the movement of own and budget-supplied resources, the problem of the contents of the financial plans (the income and expenditure balances) at the enterprises, associations, ministries and departments assumes particular urgency.

In examining this problem it is essential to bear in mind that credit and financial planning is subsystems of a unified system of national economic planning and they are interrelated.

The content of financial planning consists in determining the demand for monetary funds, the conditions for the formation and use of them to ensure expanded reproduction, the amounts and sources for the formation of income, the forms of income distribution, redistribution and use in all levels of the economic mechanism.[2]

The indicators of the credit plans are closely tied to the indicators of the financial plans. Thus, the norms for own working capital set in the financial plans serve as an important point of departure in determining the demand of the economy for credit, since basically above-norm material inventories are the object of crediting. The volume of a number of credits to an enterprise depends upon how the profit of the enterprise is distributed in its financial plan, the demand for long-term credit is determined on this basis, and so forth.

At the same time, the financial plans of the economic organizations at present do not show individual indicators which are important for credit planning. The financial plans are oriented at disclosing relationships with the state budget. They do not provide the very opportunity for the presence or formation of above-norm inventories (in a financial plan the funds are isolated only for an increase in the norm of own working capital), reciprocal debtor and creditor liabilities, while the use of carryover balances of the economic incentive funds and a number of other funds is not shown. All of this does not make it possible to use the enterprise financial plans as the main basis for compiling the credit plans, and forces the bank to demand from the enterprises separate calculations for the demand for credit (primarily short-term related to the working capital).

In the literature on the questions of financial and credit planning, for a long time the problem has been discussed of compiling a unified financial-credit plan for the enterprises. The importance of this was emphasized in the recommendations of the All-Union Conference on the Improving of Planning and Economic Work in the National Economy; this was held in May 1968 in Moscow. Many economists consider it possible and necessary to draw up a unified financial-credit plan on the level of the enterprises and associations, the ministries and departments. Such an opinion is held by N. D. Barkovskiy, A. M. Lyando, I. D. Mamonova, M. D. Usmanov and a number of other economists.[3] But some, for example, A. T. Cheblokov, feel that "the integration of financial and credit planning balances is possible only on a level of the national economy."[4]

In our opinion, a unified financial-credit plan can be drawn up at the enterprise level as can be seen from the practice of drawing up monthly financial plans (payment calendars) by the enterprises. Let us recall that a monthly financial plan has approximately the following content (see the chart).

(in thousand rubles)

Items	For month	Including 10-day periods
I. Income and Receipts		
Receipts from sales and services		
Receipts for overdue liabilities of purchasers and sales of unnecessary property		
Allocations from budget		
Obtaining of bank loans		
Other receipts (from superior organization, and so forth)		
Total income and receipts		

II. Expenditures

Wages
Payments to budget
Payments for capital investments
Payments to superior organization
Deductions into economic incentive funds
Payments to suppliers
Retirement of bank credits
Other expenditures

Total expenditures

III. Balance (+, -) of income and expenditures

Under present-day conditions the indicators given above can be calculated (and a majority of them is planned) for an annual and 5-year period, and for this reason the incorporation of a special section describing the monetary operations in the financial plan of the enterprises should not represent any special difficulty.

The effectiveness of the influence on the reproduction process in the course of financial and credit planning is higher if the movement of the monetary funds is planned comprehensively at the initial level, that is, at the level of the enterprise or production association. But with the separate compiling of a financial plan and a credit plan, comprehensiveness is not achieved. This leads to a situation where even in the stage of drawing up the plan, individual elements of fixed and working capital are not secured by the planned financial sources, and overdue creditor (debtor) liability remains in circulation.

The poor results of the effect of the financial and banking bodies on reducing above-norm material inventories generally and uncredited ones, in particular, is due, in our view, precisely to shortcomings in financial and credit planning. If the sources for covering them are not envisaged either in the financial or credit plan, then the enterprise which holds such inventories either unsoundly uses the assets of its partners in economic transactions or does not return the loans to the bank and has debts to the budget, superior and other organizations. The existing crediting and payments method does not always prevent the formation of reciprocal debts, particularly for documents which do not apply to payments for goods and services.

If the financial plan of the enterprises will consider the presence of all monetary funds and all obligations (debts) at the start of a period being planned, then this will force the economic organizations to seek out assets for eliminating abnormal debtor and creditor liabilities. This should help to reduce the sphere of the unplanned redistribution of monetary resources in the economy and better balance all monetary circulation in the nation.

The drawing up of a financial and credit plan will make it possible to ensure a unified approach of the financial and banking bodies to assessing the state of enterprise finances as well as improve the quality of management over monetary funds in the national economy. For an actual transition to the compilation of such a plan, the appropriate bodies must accelerate the elaboration of the methods for compiling the unified financial-credit plan of an enterprise.

An organic combination of sectorial and territorial planning is one of the most important tasks of planning. In an analysis of this problem, it is essential to bear in mind that credit planning is closely tied to the organizational structure of national economic management, and for this reason the predominance of the sectorial or territorial aspect in national economic management leaves it imprint on the organization of credit planning. It is not accidental that interest in the territorial aspects of credit planning rose at the end of the 1950's and at the beginning of the 1960's, when under the conditions of organizing the sovnarkhozes [council of the national economy], it was necessary to draw up a plan in a territorial breakdown.

In line with the then following reorganization of national economic management, attention to the problem of territorial credit planning lessened, but with the start of the 1970's, interest in it again rose. As is known, since 1974, Latvia began to carry out an experiment of having the institutions of the USSR Gosbank draw up credit plans for the divisions and the office as a whole. Considering this experience, since 1978 the USSR Gosbank institutions in Lithuania, Moldavia, Latvia and Estonia have been involved in drawing up credit plans.

The practice of having the designated banking institutions draw up credit plans which would show all credit investments and a significant portion of the resources has affirmed the possibility and advisability of the active involvement of the banking divisions and offices in planning, and above all credit planning.

However the practice of drawing up credit plans by banking institutions is still not widespread and this is caused by a number of factors.

In the first place, the elaborating of a credit plan for a banking division or office is a very labor-intensive matter due to the fact that it is compiled for the full range of self-financing organizations served and for the full range of crediting projects.

Secondly, the compiling of the plan by the banking workers is complicated by the fact that many enterprises and economic organizations do not have experience in drawing up credit applications. The extended period of focusing predominantly on centralized forms of compiling credit plans has led to a situation where many industrial associations and administrations of the ministries underestimate the importance of obtaining credit applications from subordinate economic bodies and draw up the draft plans from the summary data. In our view, one of the reasons for this is the labor intensiveness of carrying out the credit calculations due to the multiplicity of crediting projects (all the more with the opportunity of redistributing limits between the projects and between the enterprises in the course of carrying out the plan) as well as the absence of a unified enterprise financial-credit plan as a control document.

Thirdly, with the shifting of the center of gravity in credit planning to the bank divisions and the immediate loan recipients, the role of the superior bodies of economic management and the apparatus of the USSR Gosbank offices and Board in credit planning is altered. This requires a certain readjustment in the work in the direction of having them solve more general, principled questions relating to the organization and development of credit relations and the freeing of individual economic bodies from constant interference.

The attitude toward the compiling of a summary credit plan in a territorial breakdown is also influenced by the circumstance that the specialists of the bank divisions and offices do not have an opportunity to see the structure of their credit plan as it is represented, for example, in the credit plan of the USSR Gosbank due to the specific features of accounting for individual operations on the bank balance sheet. On the balance sheets of many banking institutions the lion's share of resources is taken up by the balances of funds in payments between banking institutions (in the IAT [interaffiliate turnover] accounts) which can only be broken down with great difficulty. As a consequence of this such results of monetary circulation are "lost" as the formation of resources of the Union and republic budget in a rayon (oblast) in terms of their fulfillment in recent years, the attracting of savings bank deposits, the putting of money into circulation and the taking of it out, and so forth.

For this reason there is the urgent task of improving accounting for a number of operations on the balance sheets of the banking divisions and offices, and above all the operations which are presently shown as part of the balance of the IAT accounts. In our view, from the make-up of the balances of the IAT accounts, we must isolate the totals related to the accounting of deposits by the population in savings banks, emission operations, budget funds in closing down the balances of budget accounts at the end of the budget year, the money of the USSR Gosstrakh [Main Administration for State Insurance] and certain other funds. This would make it possible to better utilize the balance sheets of the bank divisions and offices in economic analysis of the processes in monetary circulation and create good prerequisites for the banking workers to analyze the balance of the credit institutions themselves on the basis of a consolidated grouping of resources and credit investments and to compile balanced balance sheets and balance sheets for payment relations between the bank and the economy and public.[5] Profound and constant work on the bank's balance sheet will inevitably lead to the working out of proposals to improve bank accounting and will help to raise the quality of credit planning.

FOOTNOTES

1. See, for example, M. M. Yampol'skiy, "Resury Kratkosrochnogo Kredita" [Short-Term Credit Resources], Moscow, Finansy, 1974; N. D. Barkovskiy, "Problemy Kredita i Denezhnogo Oborota v Usloviyakh Razvitogo Sotsializma" [Problems of Credit and Monetary Circulation under the Conditions of Developed Socialism], Moscow, Finansy, 1976; V. S. Zakharov, "Kredit v Sisteme Upravleniya Ekonomikoy" [Credit in the Economic Management System], Moscow, Finansy, 1979; DEN'GI I KREDIT, No 8, 1980, pp 3-12, and so forth.

2. See V. S. Pavlov, "Finansovyye Plany i Balansy v Sisteme Ekonomicheskogo Planirovaniya" [Financial Plans and Balances in the Economic Planning System], Moscow, Finansy, 1978, p 54.

3. See, for example, N. D. Barkovskiy, op. cit., pp 153-155.

4. "Finansy i Khozraschet v Sisteme Upravleniya Otrasl'yu" [Finances and Cost Accounting in the Sectorial Management System], Moscow, Finansy, 1979, p 50.

5. See N. N. Ryauzov, V. I. Solovov, "Statistika v Kreditnykh Uchrezhdeniyakh" [Statistics in Credit Institutions], Moscow, Finansy, 1980, pp 110-123.

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INVESTMENT, PRICES, BUDGET AND FINANCE

NOTED ECONOMISTS EXPLAIN BALANCE SHEET DATA

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 81 pp 19-25

/Article by A. Volkov and M. Eydel'man: "The Use of the Data of the Intersectorial Report Balances for the Analysis of the Main Economic Proportions"/

/Text/ The enormous, continuously increasing scale of production, the broadening and complication of intersectorial contacts require the constant improvement of the techniques and methods of economic analysis. The elaboration of intersectorial report balances and the analysis of the data obtained on the basis of them hold an important place among these methods.

The elaboration of the regular intersectorial report balance of the production and distribution of output in the USSR national economy for 1977 was completed in July 1979. This is the fourth intersectorial report balance which has been compiled by the USSR Central Statistical Administration in the past 20 years for a large number of sectors and products. In all 117 sectors of physical production, including 100 sectors of industry, are distinguished in it. Starting with the report for 1975 the USSR Central Statistical Administration has annually compiled short intersectorial report balances for combined sectors of the national economy and industry.

The data of the intersectorial report balances contain extensive material which makes it possible to obtain a concrete description of the process of expanded socialist reproduction, to identify the most important economic proportions and intersectorial contacts in the national economy, to study the sectorial structure and technical and economic shifts in production and others.

Among the main economic proportions, which determine the structure and dynamics of expanded socialist reproduction, are the proportions between the production of means of production (subdivision I of social production) and the production of consumer items (subdivision II). The establishment of the correct correlations of these two largest subdivisions is one of the most important tasks of national economic planning. They are in many ways governed by and most closely connected with other most important national economic proportions, particularly the proportions between production and consumption, consumption and accumulation, consumer demand and its backing with goods and others.

The intersectorial report balances for a length period (for 1959, 1966, 1972, 1977) make it possible to calculate and analyze the correlations not only of the two main economic subdivisions, but also within each of them in the context of a large number of sectors and to study the physical and value structures of social production over the past 20 years.

Table 1

Correlation of the Output of Subdivisions I and II of Social Production, Percent

Year	Gross national product		
	total	including the output of	
		subdivision I	subdivision II
1959.	100	58.9	41.1
1966.	100	62.2	37.8
1972.	100	63.4	36.6
1977.	100	64.2	35.8

Note. Here and below in the tables the data are calculated (on the basis of the intersectorial report balances) according to the gross production in the actual sales prices which were in effect during the corresponding years.

The data of Table 1 show that during the period in question (1959-1977) the proportion of means of production in the gross national product invariably increased. At the same time, however, starting in the second half of the 1960's the tendency for the growth rates of the output of subdivisions I and II to converge appeared. Thus, whereas from 1959 to 1966 the proportion of the output of subdivision I in the gross national product increased by 3.3 points, from 1966 to 1972 it increased by 1.2 points, while from 1972 to 1977 it increased by 0.8 point. All this reflects the peculiarities of the effect in our country of the economic law of the priority increase of the production of means of production.

During the period in question the periodic increase of the wholesale prices for means of production had a substantial influence on the increase of the proportion of the output of subdivision I, while the retail prices for consumer items practically did not change. From 1966 to 1972 alone the proportion of means of production in the gross national product increased from 62.2 to 63.4 percent, that is, by 1.2 points, primarily as a result of the increase of the prices for means of production (about 1 point) and in a relatively small part (0.2 point) under the influence of other factors. From 1959 to 1966 and from 1972 to 1978 the proportion of means of production in the gross national product increased to a considerable extent owing to the increase of the proportion of the output of materials-consuming sectors, the increase of the materials-output ratio of individual sectors, especially agriculture, and others, although during these periods the prices also changed, which also influenced the change of the correlations of the output of subdivisions I and II (the increase of the procurement prices for agricultural products, changes of the prices and rates in construction, partial changes of the wholesale prices in industry and others).

The tendency for the growth rates of the output of subdivisions I and II of social production to converge is a consequence of the economic strategy, which was worked out by the party and the government and is aimed at the further dynamic development of social production, the more and more complete satisfaction of the material and spiritual needs of the workers and the utmost increase of their standard of living. In his speech at the CPSU Central Committee Plenum (21 October 1980) L. I. Brezhnev said that "the rapid development of the sectors of group B is a task of paramount economic and political importance." The need "to ensure a faster growth rate of the output of the sectors of group B of industry as compared with the growth rate of the output of the sectors of group A of industry" is indicated in the draft plan of the CPSU Central Committee for the 26th party congress, "The Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990." Thus, it is planned to increase the output of industrial products during the five-year plan by 26-28 percent, including means of production by 26-28 percent and consumer items by 27-29 percent. Such a ratio in the development of both subdivisions of industrial production is aimed at the further improvement of the structure of the national economy, the planned meeting of its needs for material resources and the backing of the effective demands of the population.

The development of the economy in the USSR is characterized by great dynamism. With the continuous stable development of all the sectors of the national economy the sectorial structure of production is continuously changing--the proportion of some sectors is increasing and the proportion of others is decreasing. The output of industrial products and first of all the products of heavy industry is increasing at a leading rate, as a result of which its proportion in the gross national product and the national income is increasing. The proportion of the output of agriculture, given the overall increase of its volume, is decreasing. At the same time the portion of the agricultural output, which is being sent for industrial processing, is increasing.

The analysis of the data of the intersectorial report balances shows that during the period in question (1959-1977) the sectorial structure of the output of the main economic subdivisions changed appreciably. The proportion of the output of the sectors of heavy industry, especially machine building, increased in the total volume of the output of products of subdivision I. At the same time such sectors of machine building as instrument making and electronic engineering developed the most rapidly.

The proportion of consumer items, which are produced in the sectors of heavy industry and especially in machine building, increased in the total volume of the output of products of subdivision II. The output of durable consumer items--passenger cars, radios, televisions, refrigerators, washing machines and others--increased by a considerable amount.

The change in the proportion between the main economic subdivisions of the national product and within subdivision I between the production of means of production for the production of means of production and the production of means of production for the production of consumer items requires a detailed study. These correlations in many ways depend on the effectiveness of the use of means of production and their quality. The comprehensive analysis of the data of the intersectorial balances of output, capital and labor expenditures makes it possible to study these proportions in detail both in the area of their sectorial composition and in the area of the rationality of their structure.

Significant structural changes have occurred in the output of industrial products, in which the output of the products of the sectors which govern technical progress in the national economy: machine building, electric power engineering, the chemical and petrochemical industries and others, increased at a leading rate. New types of machines and equipment and new, more advanced types of materials appeared.

Table 2

Sectorial Structure of the Gross National Product, Percent of the Total

Year	Gross national product					
	total	including the output of				
		industry	agriculture	construction	transportation and communications	trade, procurement, material and technical supply and others
1959. . . .	100	61.4	17.3	10.3	4.1	6.9
1966. . . .	100	62.9	17.6	9.6	4.3	5.6
1972. . . .	100	63.9	15.2	10.8	4.1	6.0
1977. . . .	100	63.8	14.9	10.1	4.3	6.9
1978. . . .	100	63.8	14.8	10.0	4.4	7.0

In the cited table the proportion of the sectors in the gross national product is calculated on the basis of the data on the gross production volume in the actual sales prices. Here in conformity with the prevailing system of prices the turnover tax as a part of the net income realized in the prices of industrial output is taken into account in industry. In reality the turnover tax is also created in other sectors of the national economy, first of all agriculture. In distributing the national income among all the sectors of the national economy, for example, in proportion to the wage, which reflects to a certain extent the labor expenditures, the proportion of the national income created in agriculture will increase, the proportion of the gross production of agriculture in the total amount of the gross national product will increase accordingly. At present 28.4 percent of the total amount of the national income (with allowance made for the turnover tax as a part of the net income realized in the prices of industrial output) is created in agriculture.[1]

The intersectorial report balances of the output and distribution of products make it possible to calculate the value structure of the national product and the national income as a whole and for the main economic subdivisions and to identify the trends of its change (Table 3).

The data of Table 3 show that the proportion of the material production expenditures, which was calculated in the prices actually in effect, increased regularly especially in subdivision I. This was caused to a considerable extent, as was already stated, by the increase of the wholesale prices for means of production. In addition to price factors, the increase of the material production expenditure

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1. See KOMMUNIST, No 11, 1980, p 39.

in the gross national income was also influenced by: the increase of the materials-output ratio in agriculture; the development of specialization in industry; the increase of the amounts of amortization deductions as a result of the rapid increase of the amount of fixed capital.

Table 3

Value Structure of the Gross National Product, Percent of the Total

	Total product (p)	Material production expenditures (c)	Wages (v)	Surplus product (m)
Total gross national product				
1959.	100	50.8	26.1	23.1
1966.	100	54.4	23.9	21.7
1972.	100	56.3	22.0	21.7
1977.	100	57.3	21.1	21.6
Output of subdivision I				
1959.	100	52.1	29.5	18.4
1966.	100	57.7	24.7	17.6
1972.	100	59.5	22.2	18.3
1977.	100	61.5	21.1	17.4
Output of subdivision II				
1959.	100	49.0	21.3	29.7
1966.	100	49.2	22.6	28.2
1972.	100	50.8	21.7	27.5
1977.	100	49.8	21.2	29.0

The increase of the materials-output ratio in agriculture was caused mainly by the increase of both the consumption of industrial products (mineral fertilizers, chemicals, electric power, petroleum products, mixed fodders and others) and the amortization deductions from the value of the fixed capital, the amount of which in agriculture during the period in question increased considerably.

It is necessary to indicate that if we calculate the materials-output ratio in the national economy in comparable prices (which determine the physical amount of the proportion of the material production expenditures in the gross national product), a tendency for the proportion of the material production expenditures in the gross national product to decrease appears.[2] Thus, the proportion of these expenditures in the gross national product (excluding amortization), which was calculated in comparable prices, decreased from 50.5 percent in 1959 to 49.2 percent in 1966 and to 48.8 percent in 1972.[3] Its decrease also continued in 1972-1977 (by roughly

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[2] It is more correct to determine the materials-output ratio without amortization.

[3] See "Faktory i tendentsii razvitiya struktury narodnogo khozyaystva SSSR" /Factors and Trends of the Development of the Structure of the USSR National Economy/, Moscow, Nauka, 1977, p 351.

0.4 point). The proportion of the material production expenditures (in comparable prices) especially decreased in industry. Of the individual sectors of the national economy the increase of the proportion of material production expenditures in both current and comparable prices is occurring in agriculture, which was caused by the intensification of the industrialization of agricultural production, the increase of chemicalization and electrification and the increase of the capital-labor ratio of agriculture.

The ratio of the surplus product to the wages, or the standard of the surplus product (m : v), which is calculated at the stage of primary distribution, is an important characteristic of the structure of the primary distribution of the national income for the national economy as a whole, the main economic subdivisions and the sectors of physical production. The data showing how these ratios changed during 1959-1977 are cited below.

Table 4

Ratio of the Surplus Product to the Wages, Percent

Year	Total gross national product	Output of subdivision I	Output of subdivision II
1959*	88	62	139
1966*	90	71	125
1972*	98	82	127
1977	102	82	137

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*See "Faktory i tendentsii razvitiya struktury narodnogo khozyaystva SSSR," p 358.

From the data of Table 4 it is evident that the standard of the surplus product for the main economic subdivisions and the sectors of the national economy changed in different ways. In subdivision I it increased significantly from 1959 to 1972 and practically did not change and stabilized from 1972 to 1977. In subdivision II the standard of the surplus product decreased significantly from 1959 to 1966, increased negligibly from 1966 to 1972 and considerably from 1972 to 1977.

The standard of the surplus product is the highest in light and the food industries. During the past two to three five-year periods the standard of the surplus product increased in machine building. All the indicated changes are a result of the improvement of the system of prices, as well as the influence of a number of other factors (the change of the sectorial structure of production, the profitability of a number of sectors and others).

The analysis of the trends of the change in the standard of the surplus product for the national economy as a whole, by the main economic subdivisions and the most important sectors is of great importance for the study of the laws of the development of social production and the further improvement of the planned management of the national economy.

The ratios cited in Table 4 characterize the proportions at the stage of the primary distribution of the national income. With allowance made for the redistribution of the national income the ratio of the surplus product (less the payments and benefits given to workers employed in the sphere of physical production and to the members of their families from public consumption funds, and with the addition of the taxes and payments paid by them) and the ultimate income of the workers employed in this sphere of production (wages less taxes and payments and with the addition of public consumption funds) will change significantly and will be about 60 percent.

The increase of the standard of the surplus product at a certain stage to a considerable extent was caused by the improvement of the system of prices: the increase of the purchase prices for agricultural products during 1959-1966, the reform of wholesale prices in 1967, the increase of the estimated cost of construction and installation work on 1 January 1969 and others. According to available estimates, just as a result of the reform of wholesale prices, which was implemented in 1967, the standard of the surplus product increased by approximately 4 points.

From the data of the intersectorial reporting balance it is possible to calculate the indicators which characterize the basic conditions of the proportionality of expanded socialist reproduction, which are expressed by the following equations:

$$I(v+m) > IIc; \quad Ip > (Ic + IIc); \quad [I(v+m) + II(v+m)] > IIp,$$

where $I(v+m)$ and $II(v+m)$ are the net production (respectively of subdivisions I and II); Ic and IIc are the material production expenditures (respectively of subdivisions I and II); Ip and IIp are the output (respectively of subdivisions I and II). Here in all three inequalities the left member is greater than the right member by the same amount. This is a resource of the expansion of production, which we will call the potential of expanded reproduction.

Table 5

Excess of the Net Production Volume of Subdivision I $[I(v+m)]$ Over the Amount of Material Production Expenditures of Subdivision II (IIc)

Year	Excess of I(v+m) over IIc, or the potential of expanded reproduction	
	Billions of rubles	Percent of surplus product of subdivision I
1959. . .	22.7*	75.4
1966. . .	35.5*	71.0
1972. . .	50.7*	60.8
1977. . .	65.3	61.5

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*"Faktory i tendentsii razvitiya struktury narodnogo khozyaystva SSSR," p 364.

The data of Table 5 show that not the entire surplus product is used for the purpose of expanding production; a certain part of it goes for the meeting of needs and the development of the nonproduction sphere. During the period in question with the continuous increase of the absolute amounts of the surplus product of subdivision I the proportion of it used for the expansion of production decreased and the portion used for meeting the needs of the nonproduction sphere increased. This is the result of the long-term policy being pursued by the party and the government of increasing the material well-being and cultural standard of living of the people.

The data of the intersectorial report balances make it possible for a large number of sectors to determine in detail the physical composition of the correlations examined above. It is necessary to improve in every possible way the scientific techniques and methods of analyzing the intersectorial report balances; to use the data obtained on their basis more extensively for studying the proportionality and balance in the development of all the sectors of the national economy.

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COMPARABILITY OF SOCIALIST, CAPITALIST DATA DISCUSSED

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 81 pp 38-42

[Article by Yu. Ivanov and I. Ryzhov: "Improvement in Methodology of Indicator Comparison of System of National Accounts and Balance of National Economy"]

[Text] In the Concluding Act of the Conference on Security and Cooperation in Europe, six years since its signing having elapsed in 1980, it is emphasized that the value of statistical data on the international plane significantly depends on their comparability. This applies in particular to statistical data on production, national income, consumption, labor productivity compared on the basis of mutually comparable classifications.

The most important and at the same time difficult is the comparison of generalizing indicators of the system of national accounts (SNS), employed in capitalist countries, and statistical balance of the national economy (BNKh), compiled in socialist countries and reflecting the nature of their social-economic system. A methodology for such a comparison was developed by the UN Statistical Commission and published in 1977.

The comparison of the SNS and the BNKh constitutes an important aspect of the general scheme implemented by the UN in the field of international comparisons of national income and other macroeconomic indicators. The task of this plan is to ensure comparability of data on the national product of as many countries as possible which could be included for an analysis of the share of individual countries in the world economy, for the computation of world and regional indexes of economic growth, for the solution of other practical tasks of the UN and, in particular, for determination of countries' contributions to the budget of this organization. The methodology of comparing the SNS and the BNKh establishes basic principles for bringing into comparable form such indexes of both systems as the national income and the gross domestic product, final consumption, accumulation, primary income of the population and wages, primary receipts of enterprises and profit and the like. It is based on a careful analysis of the most significant differences existing among the basic theoretical and methodological principles of computing comparable indicators.

The question of chief conceptual differences between the SNS and the BNKh has been adequately elucidated in the literature. Let us only recall that one of the chief differences consists of an unequal determination of the production sphere of the national income: whereas in socialist countries, which means in the BNKh, this sphere encompasses only sectors of material production, in capitalist countries in conformity with SNS principles the results of the operation not only of enterprises of sectors of material production but also of sectors engaged in the provision of nonmaterial services, including the army, police and general government. Moreover, the production sphere includes the holding of housing accommodations regardless of whether they are rented or not, the provision of services offered by financial intermediaries, banks, insurance organizations and so on; provision of services provided by hired domestic help.

In countries using the SNS, the national product does not just include the results of juridically illegal types of operation (for example, the sale of narcotics) and also of auxiliary domestic operations in the field of preparation of food, maintenance of cleanliness in the house and the like. But at the present time, proposals are being more insistently submitted on expanding the production sphere in the SNS and on including in it in particular the results of functioning of many auxiliary domestic housekeeping operations right up to upbringing of children. In the opinion of the authors of these proposals, they could be included in the overall domestic product in the standard evaluation.

In addition to this, a whole series of differences exists between the SNS and the BNKh in approaching the accounting of individual items of receipts and expenditures, certain flows of products, in methods of evaluating indicators, their classification and so on.

The methodology of comparing indicators of the SNS and the BNKh consists in principle of the following basic parts:

a detailed description of conceptual differences between those indicators of both systems whose international comparisons would make economic sense and be of practical interest;

so-called modified matrices with whose help the general structure of the SNS and the BNKh and at the same time indicators (or their elements), which are considered differently in one of the systems, are singled out. This makes it possible to go from a general description of conceptual differences to the more exact matrix form of their expression and at the same time to prepare the initial material for the compilation of comparison tables;

comparison tables in which a recalculation is made of SNS indicators in accordance with the methodology adopted in the BNKh and vice versa. This recalculation involves a special regrouping of the elements comprising these or those indicators. The methodology provides for three types of comparison tables. They differ depending on whether a recalculation is made of data on net production (added value) created in individual sectors and on the end use of the national income or on the gross product and material outlays (intermediate use). Corrections in the different comparison tables are reciprocally coordinated, which ensures identity of results for the recalculations made in all the three tables.

The methodology of interrelating the SNS and the BNKh approved by the UN Statistical Commission takes into account the basic theoretical differences between the two systems, first of all in the field of the bounds of the sphere of production of the national income as well as the special features of the accounting of certain categories of receipts and expenditures, production flows. The methodology reflects differences in the classification of individual components of a newly created value. For example, while in the SNS deductions for social security of workers and employees come from wages and are accounted as part of the latter, in the BNKh--as part of the primary income of enterprises. It should also be noted that attempts are made in the methodology to reflect the fact that all indicators in the SNS are recorded on the so-called domestic (or national) basis, while the territorial principle is used in the accounting of all economic operations.

At the same time the methodology practically does not take into consideration important differences in the organization of the economies of the countries using the SNS and the BNKh. It is considered that these differences exercise an influence only on a comparison of indicators of receipts and expenditures of enterprises and institutions, receipts and outlays of the state budget, sources of financing capital investment and indicators of redistribution of receipts. Nonetheless, in many cases, indicators of the flows of production and receipts from its production may be to a certain degree incomparable in view of the fact that the financing of certain types of activity is differently organized. For example, almost all types of activity relating to servicing of production are organized in the capitalist world on a commercial basis and the value of corresponding services in the SNS relates to intermediate use. All these forms of servicing of production in a number of cases are organized differently in socialist countries. The expenditures of the pertinent institutions are financed from the budget and are not included in the costs of enterprises that use the services. As a result, in the compilation of the BNKh, material costs of some servicing enterprises as a rule are included in final use. Thus, in the GDR, USSR, Czechoslovakia, and in part in Hungary, services in a number of cases relating to the servicing of agricultural production are provided free to sovkhozes and kolkhozes, while the material expenditures of institutions providing the services are included under final use. In this way, the comparability of national income indicators is impaired. Another example: in some capitalist countries, for example, in the United States, expenditures of radio and television are basically financed from revenues from commercial enterprises for advertisements. In compilation of the SNS, payments for radio and television advertising are included under intermediate production and are excluded from the national product. But in other capitalist countries, expenditures for radio and television are financed from the budget or by means of direct payments by the population. In these countries, they are included under final use and are not excluded from the national product. It is clear that the indicated difference can exert an influence on the results of international comparisons of the national product. If the data on the national product are recalculated for both of the above-mentioned group of countries according to the methodology of balance of the national economy, in the one case, expenditures on maintenance of radio and television paid by enterprises will be included in the national income computed according to the methodology of the BNKh and in the other, these expenditures, financed through the budget or through payments of the population will be included in the national income only to the extent of their material part.

Despite the pointed out deficiency, the methodology of correlation of indicators of the SNS and the BNKh serves as the basis for carrying out calculations in the field of international comparisons. The UN Statistical Bureau in cooperation with the statistical administrations of a number of countries has carried out calculations on the actual data of the balances of these countries.

Nonetheless, the methodology of correlating indicators of the SNS and the BNKh, in our view, can be further improved. First of all, it would be advantageous to improve interrelation and coordination between modified matrices, on the one hand, and comparison tables, on the other. Then the comparison tables will represent a scheme of regrouping of entries contained in the modified matrices. This in turn will ensure a stricter coordination between interconnected items in the different comparison tables, based on different types of data. Moreover, the recalculation procedure described with the help of matrix elements will undoubtedly be more precise, and laconic, while the content of each entry in the matrix and consequently of each item in the comparison tables will be more strict and consistent.

Improvement of the methodology will also be helped from our point of view by the introduction of two sets of comparison tables instead of one provided by the existing methodology: one for the recalculation of the gross domestic product (and its components) according to the BNKh methodology and the other for the recalculation of the national income according to the SNS methodology. Within the framework of an individual set of the comparison tables, it is easier to achieve coordination among interrelated items and also a stricter consistency of the terms and categories used. For example, the general comparison tables for transition from the gross domestic product (VOP) to the national income (ND), that is, the computation of the gross domestic product according to the BNKh methodology and, conversely, the transition from the national income to the gross domestic product (computation of the national income according to the SNS methodology) provide the possibility of easily establishing the difference arising from deducting from the gross domestic product the value of services provided by private noncommercial organizations serving households. But the requirement of adding the value of the services of these organizations to the national income can hardly be understandable to statisticians of socialist countries, since such organizations do not exist in countries with centrally planned economies. The use of two sets of comparison tables coordinated with the corresponding modified matrices make the recalculation procedure more precise, internally coordinated and more understandable.

One of the important directions of improvement in methodology is the introduction of a number of additional corrections for the purpose of improving the comparability of the national product and its structure. There should be remembered in this regard, for example, possible additional corrections for this or that methodology for such items as representative expenditures of enterprises, not fully amortized costs, trade price markups in connection with sale of land, financial assets and so on. Whereas in the SNS representative expenditures of enterprises are included in intermediate use, in the BNKh they are classified as final expenditures.

Moreover, it would appear to be advantageous to correct certain inaccuracies and discrepancies in the comparison tables. For example, in the table based on data on ultimate use of the national product, corrections should be introduced into the indicatorsof fixed-capital use.

Improvement of methodology is also related to the possibility of using for recalculations the "System of Indicators of Nonmaterial Services" (SPNU), developed several years ago by the CEMA Permanent Commission on Statistics. This system of indicators describes the most important aspects of economic activity in the sphere of nonmateri al services. Supplementing traditional indicators of balance of the national ec basically characterizing flows of material wealth or income obtained in the proc material production, the SPNU is bound to contribute to the expansion and deepening of economic analysis. It undoubtedly could be enlisted for the coordination of the SNS and the BNKh and for calculations of the gross domestic product of countries making up the balance of national economy. The SPNU contains a number of interconnected tables disclosing these or those aspects of the economic process in the sphere of nonmaterial services: the resources and use of nonmaterial services, the structure of expenditures connected with the rendering of services, revenues and outlays of organizations and institutions engaged in nonmaterial production and so on. Although at first glance, it may seem that the SPNU is identical with corresponding sections of the SNS, in reality these two systems differ from each other. One of the ways the SPNU differs from the SNS is the fact that services of a social-cultural character proffered workers and employyes of the corresponding subdivisions of enterprises are considered in it as an end use, while in the SNS they are considered as intermediate outlays of enterprises. The services of financial agents (commercial and savings banks, insurance companies and the like) apply in the SNS to intermediate use, while in they SPNU they apply to end use. Certain features are to be found in evaluation of services rendered to organs of general management. Although in both systems, the value of these services is taken as being equal to the expenditures connected with their presentation, in the SNS in distinction to the SPNU there are included in the aggregate sum of these costs certain expenditures of a capital character, for example, for the erection of installations for military use.

These and other features of the systems must be taken into consideration in the preparation of the comparison tables in which there could be computed on the basis of SPNU categories the indicator of gross domestic product (or the indicators of its chief components) for countries using the BNKh. From our point of view, an additional set of comparison tables based on SPNU indicators should be included in the methodology of coordination of the SNS and the BNKh.

As has already been pointed out, the UN Statistical Bureau carried out a number of experimental calculations for the purposes of testing the methodologies of comparison of the SNS and the BNKh. Of major significance is the further expansion of these calculations. In this connection, work deserves attention that is being done in Hungary and France in the field of comparison of their system of national accounts and balance of the national economy on the basis of actual data. The work is being done within the framework of the Conferenceof European Statisticians and with its approval, as well as with the cooperation of the CEMA and YeEK [European Economic Commission (?)]. Special interest is presented by data processing methods relating to nonsectorial production, imports and exports, indirect taxes and subsidies and so on. Practice shows that countries employ various methods of accounting for the aforesaid items. But the generalization of these methods can be useful for statisticians engaged in international comparisons. Recommendations, formulated on the basis of generalization could contribute to the improvement of calculations and to increasing their reliability. Methods of major importance are those employed in intersectorial balances of capitalist countries for determining the concept of production of nonsectorial profile. The study of these methods is important for a clearer delination of the boundary between flows of material wealth and nonmaterial services. For example, the intersectorial balance of the United States includes nonmaterial services in sectors of material production frequently for production of nonsectorial profile; consequently, the categories of wages and profit in these sectors contain elements which in the BNKh apply to redistribution flows. On the other hand, sectors engaged in the basic provision of nonmaterial services occasionally may produce on a small scale material wealth.

An important aspect of further work in the field of improvement of the methodology of compiling indicators for the SNS and the BNKh is conducting of experimental calculations for interested countries. The purpose of these calculations is testing of the theoretical positions of the methodology of coordination of the SNS and the BNKh; acquisition of experience in the field of processing of original data required for the comparisons; production of information on the special features of treating individual categories of products and expenditures; obtaining more accurate results from calculations characterizing the proportions between the gross domestic product and the national income, as well as their components.

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INVESTMENT, PRICES, BUDGET AND FINANCE

ENTERPRISE CAPITAL-OUTPUT RATIOS ANALYZED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 2, Feb 81 pp 87-94

/Article by Candidate of Economic Sciences G. Igol'nikov (Ivanovo): "The Specific Capital-Output Ratio in the Economic Mechanism of the Industrial Enterprise"/

/Text/ The implementation of measures on the strengthening of the influence of the economic mechanism on the increase of production efficiency requires that the indicators being planned objectively reflect the level of utilization of resources and make it possible to compare it not only at related enterprises of the sector for the given period, but also at the same enterprise over a number of years, as well as at a new enterprise as compared with its plan.

In the case of the production of different items at a single enterprise, just as the production of identical items at different enterprises, an equal amount of consumed and attracted resources yields a different result. At related enterprises even an identical product can be produced according to a different or a not completely coinciding process sheet. This affects the structure of the enterprise, the composition and value of the productive capital, the number of personnel, the volume of shipments of products under subcontracting arrangements and so forth. Such differences for reasons not dependent on the enterprise itself can substantially change the value and dynamics of the value indicators. It is possible to avoid such a situation by means of indicators which either are free of the indicated deficiencies or make it possible to properly take into account (eliminate) the distorting influence of the differences in production equipment of individual enterprises. Specific indicators, which characterize the amount of the total resources which have not only been consumed, but have also been attracted for the output of a unit of each type of product: the cost of a unit of output, its specific materials-output and power-output ratio, the total labor-output ratio and the specific capital-output ratio, function as such indicators.

The production cost and materials-output ratio are traditional, widely used indicators. For a number of years the total labor-output ratio, which is the expenditures of working time of all industrial personnel engaged directly in production on the output of a unit of production in physical terms, has been calculated periodically in many sectors. On the basis of the total labor-output ratio it is recommended to calculate the total number of industrial personnel engaged directly in production and, moreover, it is possible to measure accurately enough the level and dynamics of labor productivity at the enterprise.

The indicator of the specific capital-output ratio is not taken into account and is not planned at industrial enterprises. The specific capital-output ratio is the average annual value of the fixed production capital and the standardized working capital of the enterprise, which is accounted for by a unit of each type of output or their similar group in physical terms. Its total amount (standard, estimated, planned, actual) is formed from the proportionate involvement of productive capital and the standardized working capital in the production of specific items.

The specific capital-output ratio makes it possible to make the entire set and individual types (elements) of productive capital, and not only for the enterprise as whole, but also with a breakdown by shops and other intraplant subdivisions, the subject of economic analysis and planning. Thereby an opportunity is afforded to judge the role of each of them in the mobilization of production reserves and the strengthening of intraplant cost accounting. Nonproduction factors do not have a distorting influence on the specific capital-output ratio. Its value depends directly on the actual use of productive capital.

The degree of efficient use of production resources determines the level of intensification of production. The still unused possibilities of improving the use of resources will be the reserves for the increase of the intensification of production. The statistically sound appraisal of it should be made according to a system of indicators, which includes the cost, the specific materials-output and power-output ratios, the total labor-output ratio and the specific capital-output ratio of each type of product. For this the named indicators of the enterprise being analyzed (a) must be compared with their standard values (э). Thus, the level and the reserves of the intensification of production for items (y_{fi}, p_{fi}) and the total assortment and volume of the output being compared (Y_f, P_f) can be measured according to the following formulas:

$$y_{fi} = \frac{f_{i_э}}{f_{i_a}} 100; \qquad p_{fi} = \frac{f_{i_a} - f_{i_э}}{f_{i_a}} 100;$$

$$Y_f = \frac{\sum_{i=1}^{n} f_{i_э} q_{i_a}}{\sum_{i=1}^{n} f_{i_a} q_{i_a}} 100; \qquad P_f = \frac{\sum_{i=1}^{n} (f_{i_a} - f_{i_э})\, q_{i_a}}{\sum_{i=1}^{n} f_{i_a} q_{i_a}} 100;$$

where q_{i_a} is the amount of output by types at the enterprise being analyzed; f_i is the specific capital-output ratio of item i.

The standard values can be established on the basis of the standard, estimated and actually achieved indicators at leading enterprises and so forth. Their choice in each specific case depends on the goal of the measurement.

For the orientation of the enterprise toward the better utilization of each type of production resources it is necessary to establish the standard values on the basis of the standards of the specific quality indicators, which should reflect the average not only achieved, but also long-range, stepped-up and practicable amounts of the consumed and attractable resources for the output of each type of product. Therefore it is expedient at the same time as and in conjunction with the elaboration of the standards of the net production for the entire list of items also to establish the standards of the specific materials-output ratio, the total labor-output ratio and the specific capital-output ratio.

A great production efficiency should be provided for in the plans of new enterprises and enterprises which are being expanded and renovated. In this connection the importance of the standards for measuing the intensification of production on the basis of estimated indicators increases. For example, at the Cherkassy Chemical Fiber Plant the level of the intensification of production by types of output was calculated by the ratio of the rated values of the total labor-output ratio and the specific capital-output ratio, which were taken as the standard, to their actual values for individual years.

During the first year of operation of the plant the initial level of intensification according to the labor-output ratio was lower than according to the specific capital-outpur ratio (respectively 16-28 and 23-32 percent), but increased more rapidly. As a result the level of intensification according to the labor-output ratio is leading the level of intensification according to the specific capital-output ratio. In seven years of operation of the plant for individual types of fiber the output increased 6- to 13-fold, the labor-output ratio decreased to one-sixth to two-ninths, while the specific capital-output ratio decreased to ten thirty-thirds to one-third. Consequently, the increase of the output of products occurred with the simultaneous saving of living and embodied labor, that is, with a capital-saving form of the intensification of production.

For the measurement of the intensification of production the standard values of the indicators can be established on the basis of the best indicators of the leading enterprises of the sector. The use of such standards (their main advantage is that the conditions and means of their formation are known) enables the managers of each enterprise to determine the means of improving production on the basis of more perfect methods of work, which have been verified by the practice of other plants. This is especially important because starting with the 11th Five-Year Plan the assignments on the introduction of advanced know-how in the area of technology, the scientific organization of labor, production and management will be established in the annual plans of associations and enterprises.

The identification of high, actually achieved indicators of the use of production resources is becoming possible as a result of the comprehensive interplant analysis of the operation of industrial enterprises. It consists in the comparison and establishment of the degree and causes of the differences in the indicators of the operation of enterprises, shops, sections and redivisions for the purpose of mobilizing the reserves of the increase of the level of intensification of production. In combination with the intraplant analysis the interplant analysis makes it possible with the minimum expenditures of time and capital to find means of increasing the quantitative indicators and improving the qualitative indicators of production at the given enterprise, by relying on the experience of other plants. Thereby an economically sound orientation is lent to the dissemination of advanced know-how.

In the case of the measurement of the intensification of production and the interplant analysis it is necessary to reduce all the indicators to a comparable form. This means that when comparing the expenditures (resources) the latter are grouped with the same result (useful effect), and, on the contrary, the results being compared should be obtained by means of the identical amount of expenditures (resources).

In this connection it should be emphasized that the specific capital-output ratio is a structural indicator, the value of which in full conformity with the technological process is formed by components--the value of the fixed capital of the intraplant subdivisions and of the elements of the standardized working capital. By the exclusion of incomparable components it is possible to reduce the specific capital-output ratio of the same output, which is produced by related enterprises, to a comparable form, which makes it possible in a sound manner to reveal reserves and to elaborate measures on the improvement of the use of productive capital.

At related enterprises this indicator fluctuates over a considerable range. This attests to the great reserves of the intensification of production and the inadequate attention to advanced know-how. Thus, at the studied enterprises the specific capital-output ratio of newsprint (at three pulp and paper combines) differed by a factor of 2.7, alcohol (at five hydrolytic plants)--by a factor of 2, staple (at three chemical fiber combines)--by a factor of 2.1.

Not only the total value of the specific capital-output ratio of an identical product, but also its individual components differ at related enterprises. In many instances the value of the fixed capital of the main shops differs to a smaller extent than that of the ancillary shops. The difference in the value of the plantwide capital is especially great, which attests, in particular, to the lack of uniformity in the design decisions for these facilities.

The analysis also shows that in some instances at the plants, at which the overall value of the specific capital-output ratio is the lowest, the value of all its individual components is not always the lowest. This means that examples of exemplary and less successful management and the organization of production can be found at each enterprise. Under such conditions the practical importance of the constant mutual sharing of economic information and specific know-how among related plants is especially great.

The establishment of the specific causes of the difference in the value of the specific capital-output ratio of the same product at related enterprises is inseparable from the evaluation of the factors which characterize the technical and organizational level of the given works. The most complete identification of the reserves of the reduction of the specific capital-output ratio is achieved only in case of the making of an analysis of them in accordance with the structure of the capital-output ratio of each type of output being produced (by shops and sections) with the simultaneous study in each of them of the most important factors which govern the level and dynamics of this indicator.

During the 11th Five-Year Plan for the stimulation of the better utilization of productive capital it is envisaged to leave the saving on the fee for them at the disposal of associations (enterprises) on the condition of the fulfillment of the plans of production and the profit with a smaller value of the capital than called for by the plan. The consistent realization of this provision will require, apparently, in each plan period the precise determination of the achieved absolute or relative saving of capital (fixed and working by types) in the shops and subdivisions, including by factors and so forth. Only the structural indicator of the specific capital-output ratio bears such information with greater completeness and reliability. By means of it, it is possible to distribute among types of items, the shops and sections the total amount of the fee for productive capital, which is charged according to established standards for the enterprise as a whole. This is one of the means of improving intraplant cost accounting, of including the fee for productive capital in the production costs, of calculating the net production by types of output and so forth.

The intensification of the use of productive capital leads to a decrease of the specific capital-output ratio. By means of the latter it is possible to calculate the dynamics of the output being compared at one enterprise over a number of years by the formulas of the calculation of the indices of the variable and constant composition of items and the structure. The comparison of the dynamics of the capital-output ratio, which has been calculated in this way, makes it possible to appraise the influence of individual factors and their aggregate on this indicator.

The technical improvement of production is the basis of the increase of its intensity. However, the technical level of the production of individual items increases unevenly. Therefore the use of only traditional indicators of the capital-labor ratio, which reflect the average conditions of the production of depersonalized types of output, can distort the economic appraisal of the real technical level of production. It is expedient, in our opinion, in addition to the well-known coefficients to calculate the indicator of the specific capital-labor ratio (working time) by dividing the specific capital-output ratio by the total labor-output ratio.

The calculated data attest to great differences in the level and functional structure of the specific capital-labor ratio, which reflect the unequal value of the specific capital-output ratio and the different level of labor productivity, which is calculated according to the labor-output ratio in the production of individual types of items. For example, at the Donetsk Chemical Plant the maximum and minimum values of the specific capital-labor ratio differed for all capital by a factor of 18, for fixed capital--by a factor of 31.5, for equipment--by a factor of 26, for the standardized working capital--by a factor of nearly 6. Under the influence of technological and other factors of production the values of the specific capital-labor ratio differ not only absolutely, but also relatively. Consequently, a greater degree of provision with all capital does not also mean at the same time a greater degree of provision, for example, with equipment or standardized working capital and so on.

The differences of the specific capital-labor ratio in the production of similar output at related enterprises are also great. For example, at three chemical combines the differences in the specific capital-labor ratio in the production of synthetic ammonia came to 78 percent, of granulated ammonium nitrate--200 percent. At four pulp and paper combines the maximum values of the specific capital-labor ratio exceeded the minimum values in the production of commercial pulp by 6.8-fold, alcohol--2-fold and so on.

Large reserves of the improvement of the technical and economic indicators of enterprises are connected with the increase of the concentration of highly special production. There are no longer enough traditional indicators (the production volume, the number of workers, the value of the fixed capital), which are calculated for the enterprise as a whole and the entire "depersonalized" products list, for the objective assessment of its level. They need to be augmented by indicators which would characterize the amount of resources (manpower, productive capital) which are attracted (in contrast to those which are consumed) for the production of a specific amount of output of a specific type, that is, by means of the specific capital-output ratio and the total labor-output ratio.

In industry the majority of the capital investments are transformed into the fixed capital of enterprises which are being constructed, expanded or renovated. Therefore the specific capital investments and the specific capital-output ratio are independent and at the same time interconnected indicators. The former is used in the designing of objects and the planning of capital construction for the substantiation of the estimated cost of enterprises, the planning of the amounts of capital investments, the analysis of their effectiveness and so on. When it is a matter of an operating enterprise, which has been put into operation and is producing output, the specific capital-output ratio, which reflects the actual embodiment of the capital investments in the fixed capital, must be calculated. The comparison of both indicators would help to appraise the economic soundness of the plan and the completeness of its implementation at the given enterprise.

At the same time it is necessary to take the actual value of the specific capital-output ratio into account when elaborating the standards of the specific capital investments, so that they would characterize more realistically the actual expenditures on the creation of new capacities and prevent the possible exceeding of the estimated cost of construction. The interconnected use of the specific capital investments and the specific capital-output ratio is especially urgent, if we regard the planning of an operating works and new construction as a unified whole, when the capital investments for the development of the sectors of physical production are envisaged for the planned increase of the volume of output and services.

The value of the specific capital-output ratio is directly dependent on the degree of assimilation of the production capacities, which makes it possible to use this indicator for evaluating the operation of new enterprises and enterprises which are being expanded and renovated. In this connection it is proposed to calculate the so-called adjusted impact from the early and economical assimilation of the rated capacities or its loss in case of the failure to observe the named conditions during the entire period (year, quarter, month) of assimilation $\sum_{j=1}^{k}$ for the entire product assortment $\sum_{i=1}^{n}$ according to the following equations:

$$L_{э} = \sum_{j=1}^{k} \sum_{i=1}^{n} q_i (\Delta C_i + E_n \Delta M_i);$$

$$L = \sum_{j=1}^{k} \sum_{i=1}^{n} q_i (\Delta C_i \pm \Delta r_i l_{i\phi} \pm r_{i\phi} \Delta l_i \pm p \Delta l_i).$$

where $L_{\text{н}}$ and $L_{\text{п}}$ are respectively the adjusted national economic and the adjusted local impacts; q_i is the quantity of output being produced by types in physical terms; ΔC_i is the difference between the rated $C_{i_{\text{н}}}$ and the actual $C_{i_{\text{ф}}}$ cost of a unit of each type of output, rubles; $E_{\text{н}}$ is the standard coefficient of the effectiveness of capital investments; Δr_i is the absolute difference between the rated $r_{i_{\text{н}}}$ and the actual $r_{i_{\text{ф}}}$ specific profitability (each of them can be calculated as the ratio of the profit per unit of output to the capital-output ratio), percent; Δf_i is the difference between the rated $f_{i_{\text{н}}}$ and the actual $f_{i_{\text{ф}}}$ specific capital-output ratio, rubles; p is the standard of the fee for capital, percent.

In the cited equations the symbols "+" and "-" are used with allowance made for the economic content of the equation as a whole (the impact or its loss), each component and the direction of change of each indicator. The component $p\Delta f_i$ is taken into account only in cases of the levying of a fee for capital.

The adjusted local impact can also be calculated by a simplified equation:

$$L = \sum_{j=1}^{m} \sum_{i=1}^{n} q_i [(C_{i_{\text{ф}}} - C_{i_{\text{н}}}) + (r_{i_{\text{н}}} - r_{i_{\text{ф}}})(f_{i_{\text{ф}}} - f_{i_{\text{н}}})].$$

For example, the production capacities of the Ryazan' Chemical Fiber Plant for staple fiber were not assimilated during the first two years of operation. The actual indicators of the specific capital-output ratio and the cost of this type of output greatly exceeded the rated level. Nevertheless the high prices for staple fiber made it possible to cover the higher production costs and even to obtain a profit of 4,573,100 rubles. If we make the calculation according to the above-cited equation, during the period of assimilation due to the exceeding of the rated level of the cost, the capital-output ratio and the lower profitability the loss of the impact in two years of assimilation was in terms of the actual output of staple fiber 12,024.700 rubles. Depending on the method of calculation it is possible to evaluate differently the actual effectiveness of the capital investments, the results of the economic activity and the efforts of the collective of the enterprise on assimilating the new capacities.

During the 11th Five-Year Plan the formation of economic stimulation funds and the payment of bonuses to workers at enterprises, which are being put into operation, expanded and renovated, will be carried out, in particular, with allowance made for the rated indicators for the labor productivity and the production cost. In order to increase the interest also in the better use of productive capital, the corresponding stimuli can be made dependent on the adjusted impact, which is determined according to the above-proposed equations. With such an approach the practical significance of the economic substantiation of plans will increase. Moreover, continuity will be established between economic projection and the planning of the assimilation of new capacities and capacities which are being renovated (the rated indicators should be used for the substantiation not only of the effectiveness of capital investments, but also of the [illegible] indicators after the placement of projects into operation).

One of the elements of the production costs is amortization, which reflects the portion of the value of the fixed capital, which is transferred to the output. It is included in the cost not according to the actual involvement of the fixed capital in the production of the individual types of output, but in proportion to the wage of production workers, although there is no direct dependence between them and the value of each is determined by different factors. Therefore a larger portion of the amortization falls to the output produced in sections, in which manual labor predominates, than to the output produced with a higher level of the capital-labor ratio. Moreover, in many instances amortization is not made into an independent item of the cost, but is estimated in the shop and plantwide expenses. The conventional distribution of the latter in proportion to the wage of production workers leads to the redistribution of the amounts of amortization, which distorts the actual cost of individual items.

For the more valid inclusion of amortization in the cost it should be distributed among the items in proportion to the shop indicators of the specific capital-output ratio for the fixed capital. Here the amount of amortization, which is calculated for the plant as a whole and each shop, does not change. It is distributed in strict conformity with the actual involvement of the fixed capital of each intraplant subdivision in the production of individual types of output.

At the Donetsk Chemical Plant, as the calculations showed, the credited amortization according to the schedules of expenses as compared with the actual amorization (which was calculated according to capital-output ratio) was by types of output either overstated (3.8-fold) or understated (70-fold). The calculation of the amortization according to the capital-output ratio makes it possible to analyze its amount in the production of individual items for not only the main, but also the ancillary shops, as well as other subdivisions. Moreover, the opportunity arises to combine the total amount of amortization of the fixed capital of the plant into a direct uniform item of the schedule of expenses, which will increase the accuracy of the calculation of the cost of each type of output.

The profitability is one of the indicators of production efficiency. It is now calculated in different ways: on the scale of industry, its sectors and enterprises--as the ratio of the profit to the productive capital, while in the production of individual types of output as the ratio of the profit to its cost (the total cost or less the cost of the used raw materials, fuel, power, materials, semimanufactures and components). The specific capital-output ratio makes it possible to uniformly appraise and determine the profitability at all levels--from industry as a whole to the production of individual items. If the profit per unit of output is assigned to its aggregate specific capital-output ratio, it is possible to calculate the specific profitability of each type of output with respect to the productive capital involved in its production.

Calculations show that the level of profitability depends on what indicator serves as the scale for calculation. For example, at the Donetsk Chemical Plant the profitability (unprofitability) of production (as a percentage of the specific capital-output ratio and the cost by types of output) was equal to: polyvinyl chloride--(-1[illegible].4) and (-24.[illegible]); phthalic acid--7.7 and 117.7; butyl acetate--4.7 and 30.4; alkyd resin--3.3 and 8.8; Chavka powder--157.8 and 78.9.

By types of output there is no direct proportional dependence between the specific capital-output ratio and the production cost. For example, at the Novosibirsk Foam Concrete Plant the ratio of the specific capital-output ratio to the cost of silica brick was equal to 3.4-fold, foam concrete blocks--2.1-fold, heat insulation boards--1.7-fold, wall panels--3.5-fold, lime--2.3-fold, hollow flooring--1.3-fold. Consequently, the specific profitability as a percentage of the cost and of the specific capital-output ratio is different amounts.

In the system of planning prices the main ones are the wholesale prices of enterprises. The intraplant accounting prices, on the economic substantiation of which the effectiveness of the levers of intraplant cost accounting directly depends, since the subdivisions of many associations (enterprises) now receive cost accounting cost assignments, on the fulfillment of which the amounts of economic stimulation depend, should also conform to the majority of demands made on wholesale prices.

At the initial stage of the substantiation of both the wholesale and the intraplant prices for the sector and the enterprise it is necessary to establish approximately the total amount of the profit and to distribute it soundly among the types of output with allowance made for the set of price-forming factors. The capital-output ratio, the quantity and quality of living labor, in particular, are factors which are common to these types of prices and which determine the amount of the net income in the price. The need for the consistent and valid consideration of these factors when determining the standard profit per unit of each type of output especially increases under the conditions of the use of the standard net production, since the proportion of the profit in it is significantly greater than in the wholesale price.

The portion of the net income, which is included in the price of each item in proportion to the capital-output ratio of its production, is found as the product of the specific capital-output ratio times the coefficient of the ratio of the amount of the fee for capital, of the production development fund and so forth to the value of the productive capital. The portion of the net income, which is included in the price of each item in proportion to the expenditures of living labor (which is involved in its production), is the product of the wage-output ratio of the given type of output times the coefficient of the ratio of the amount of incentive and other funds to the wage fund.

At present there exist recommendations on the calculation and use of the specific capital-output ratio in machine building, ferrous and nonferrous metallurgy, the chemical, petrochemical and petroleum refining, coal, iron ore, textile, food and precast reinforced concrete industries. The corresponding research has been conducted at a number of academic and sectorial institutes, as well as industrial enterprises. However, there are so far no officially approved industrywide and sectorial methodological statutes on the determination of the specific capital-output ratio, and systematic calculations of this indicator have not been organized at enterprises.

It seems advisable on the basis of the elaborated methodological recommendations to make systematic calculations of the specific capital-output ratio for a representative multisectorial group of enterprises and types of output. This will make it possible to accumulate the necessary material for further scientific methods generalizations and practical recommendations on the determination and use of the specific capital-output ratio in the economic mechanism of enterprises.

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INDUSTRIAL DEVELOPMENT AND PERFORMANCE

SIBERIAN ECONOMISTS, MANAGERS DISCUSS PRODUCTION

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSVA (EKO) in Russian No 1, Jan 81 pp 40-69

/Round-table discussion with M. A. Bol'shakov, chief of the Novosibirsk City Administration of the State Bank, A. K. Vandyshev, director of the Siberian Electrical Heavy Machine Building Plant, B. V. Galun, director of the Etalon Pilot Plant and others led by A. G. Aganbegyan, editor-in-chief of EKO; materials for the discussion prepared by Ye. L. Lysaya: "Improvement in the Economic Mechanism"/

/Text/ Enterprises: A New Stage in Management

The decree dated 12 July 1979 of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" is the most important document aimed at solving the main problems of the country's economic development. It prepares the national economy for the major strategic decisions in the economic field that will be adopted at the 26th party congress. In his speech at the October (1980) Plenum of the CPSU Central Committee Comrade L. I. Brezhnev pointed out the need for a systematic and decisive implementation of this decree

Extensive work on the realization of the measures envisaged in the decree is done in the country. Enterprises and associations take an active part in it.

What does their experience at the new stage of management show? What does it teach us? The editorial board of EKO and the Novosibirskaya Oblast Council of Scientific and Technical Societies invited economic managers, specialists of economic services of enterprises and associations and scientists for a discussion of these problems.

The following took part in the discussion:

M. A. Bol'shakov, chief of the Novosibirsk City Administration of the State Bank;

A. K. Vandyshev, director of the Siberian Electrical Heavy Machine Building Plant;

B. . Galun, director of the Etalon Pilot Plant;

V. I. Grebenshchikov, general director of the Elektroagregat Production Association;

Yu. V. Ignat'yev, chief economist of the Siberian Textile Machine Building Plant;

Yu. M. Kiselev, director of the pilot plant of the Siberian Department of the USSR Academy of Sciences;

N. I. Mirgorodskiy, chief of the economic planning division of a tool plant;

A. S. Narinskiy, doctor of economic sciences, head of the Department of the Leningrad Financial and Economic Institute imeni N. A. Voznesenskiy;

Yu. A. Petrov, director of the West Siberian Center of Standardization;

V. A. Ovchinnikov, chief of the economic planning division of the Novosibirskmebel' Association;

I. G. Pinakov, chief of the economic planning division of the Novosibirsk Tin Combine;

L. P. Samokhin, director of the Novosibirsk Affiliate of the Planning and Technological Institute of the USSR Ministry of Installation and Special Construction Work;

S. B. Sverdlik, candidate of economic sciences, docent of the Novosibirsk Institute of the National Economy;

L. V. Stukalov, general director of the Krasnoyarsk Iskra Production Association;

Yu. I. Tychkov, candidate of technical sciences, member of the editorial board of the EKO journal;

Academician A. G. Aganbegyan, editor-in-chief of the journal, led the discussion.

National Economic Efficiency Is the Main Guideline

A. G. Aganbegyan: The reorganization of the economic mechanism is a complex and rather long economic and political task. This work is now at the stage of practical implementation. Basically, the preparation of normative acts and methodological documents has been completed. They were published in EKONOMICHESKAYA GAZETA and appeared in a separate edition. A number of new indicators, having undergone an extensive experimental check, have already been included in the practice of planning and economic incentives. In 1980 a standard of wages per ruble of output began to be approved for some ministries. A total of 800 enterprises of various ministries use the indicator of normative net output. To stimulate new output with higher national economic efficiency, a change was made in the procedure of establishment of wholesale price increments. Many more examples indicating that the realization of the decree dated 12 July 1979 is in full swing can be cited.

In the decree there are a number of problems, which enterprises can solve through the efforts of their collectives, that is, rise in the technical level and quality of output and labor productivity, use of brigade forms of organization and payment, and so forth. We would like to hear what has already been done in these areas, what problems have arisen, what is needed to resolve them and what the study and use of the published normative acts have shown.

V. I. Grebenshchikov: Apparently, it makes sense to begin the talk from the enterprises that participated in economic experiments. As is well known, new methods of management of scientific and technical progress were developed in the electrical engineering industry. The participation in the experiment enabled our association to fully renew output, to shorten the periods of mastering new articles and, in practice, to eliminate the developments that would remain on shelves from production during the 9th and 10th five-year plans. This was attained as a result of the creation of new production conditions.

The end result of scientific and technical progress--national economic effect--has become the object of planning, financing and economic incentives. On its basis the most advanced types of products and industrial processes are selected for introduction into production. All the work on new technology is financed from the unified fund for the development of science and technology, owing to which we have obtained a reliable source of funds making it possible to stably develop and introduce scientific and technical innovations into production. The reward for the development and mastering of new technology depends on the real economic effect obtained by the consumer.

However, the sectorial experiment did not take all the factors into consideration. For example, a reduction in materials-intensiveness was not stimulated. Therefore, in some cases, when new articles were produced, such indicators as the production volume and profit were lowered. For example, the association mastered a new calculator. The warranty period of its operation tripled and metal intensiveness was lowered to one-sixth. Our own labor expenditures also increased slightly during its manufacture. Since the price of calculators was lowered approximately 16 percent, we annually lose about 500,000 rubles on their output.

The set of measures envisaged by the decree must eliminate the negative effects of some factors. For example, wholesale prices of new articles with a lower materials intensiveness will be fixed with due regard for the amount of profit derived from the sale of previously produced (replaced) products. A reduction in the expenditure of materials will become profitable. The introduction of the standard of net output as the basic value indicator in processing sectors will make it possible to evaluate the work of enterprises from the position of their own labor expenditures. Other measures can also be mentioned. Their system creates the conditions for an interest in the output of high-quality articles on a high technical level and in the adoption of scientifically substantiated stepped-up plans.

A. K. Vandyshev: The Siberian Electrical Heavy Machine Building Plant also belongs to the electrical engineering sector. In 1980 our ministry experimentally introduced a new indicator--rate of growth of commodity output in comparable prices with due regard for the national economic efficiency of new articles. It logically closed the chain of planning and stimulation of new equipment. Now at the stage of plan development it is profitable for the plant to envisage output of products with a high effect for the consumer, otherwise it will have low rates of growth of volumes and smaller deductions into economic incentive funds.

A. G. Aganbegyan: Al'bert Kuz'mich, please explain the mechanism of action of the new indicator and the methods of calculating it.

A. K. Vandyshev: With the new indicator the rate of growth of production volumes is determined as the ratio of the volume of commodity output of the year under review to the volume of commodity output of the base year minus one-half the total increase in the national economic efficiency of that period. In 1979 the rate of growth in terms of the new indicator comprised 17.4 percent in relation to 1978 and for commodity output, 4.5 percent. The high rate was attained as a result of the fact that in a year the production of articles with the Badge of Quality increased from 62 to 70 percent of the total volume of output. A reduction in the production of high-quality products or a decrease in their national economic efficiency will be immediately reflected in volume indicators. As you see, there is a direct relationship between production volumes and the output of high-quality, new articles on a high technical level.

The Badge of Quality Is Not Only for the Sample

A. G. Aganbegyan: The Badge of Quality is a very capacious indicator. It is assumed that it reflects a stably high level of execution of the entire series of articles, not only the high characteristics of the developed sample. At times, however, the sample differs so much from its "brother" on the conveyer that it is even difficult to establish "blood relationships" between them. How to fight this? What is needed to attain a high quality of all certified products?

I. G. Pinakov: First of all, it is necessary to ensure a stable level of processing methods. Our combine followed this road. We produce almost 98 percent of the products with the Badge of Quality. In order to attain this, significant work on improving production processes was done. The combine entered the world market with its method of obtaining ultra-pure tin. Foreign firms bought several licenses for it.

The Institute of Hydrodynamics of the Siberian Department of the USSR Academy of Sciences and the Sibelektroterm Production Association, which manufactures individual types of equipment, help us in improving production and raising its level.

Economic incentives at the enterprise are also directed toward ensuring the stability of a high quality of products. We have several industrial reprocessing shops. The refining shop produces finished products. Previously, the other reprocessing shops were not economically responsible for the Badge of Quality. In 1980 enterprise standards for the quality of products based on reprocessing were introduced and the material incentives for shops were made dependent on the fulfillment of these standards. Four brands of tin and babbitt have now been certified at the combine and, moreover, several brands of solder are being prepared for certification.

Yu. A. Petrov: Yes, such an approach to the production of superior-quality products can give the greatest effect. Unfortunately, when awarding the Badge of Quality, the certification commission does not always have data on the level of processing methods in an enterprise and its production standard, especially in group certification, when certain types of products submitted for the Badge of Quality are examined in some city in the region or republic. The enterprise formulates well one article, receives the Badge of Quality for it and later either does not put it in series production at all, or manufactures it in such a way that it has nothing in common with the sample. Last year, as an organ of the State Committee for Standards, we were forced to interfere and remove the Badge of Quality from 40 such light industry articles in Novosibirskaya Oblast.

The role of certification in a rise in the technical level and quality of output should increase. For example, ministries and departments will compile lists of products subject to certification for the state Badge of Quality. These lists should be coordinated with the State Committee for Standards or the USSR State Committee for Construction Affairs. As I see it, the new statutes and instructions concerning the certification procedure that are now being introduced will play an important role. Although the practice of state certification has existed for a long time, there have not been such lists up to now. Therefore, products not fully reflecting the nature of the enterprise and bringing an insufficient national economic effect sometimes were submitted for the Badge of Quality. One large machine building plant in Novosibirsk submitted for certification folders for papers instead of the basic products and another, toys. Some enterprises try to obtain from ministries documents confirming that their products are not subject to certification. It is much calmer this way: There is no trouble, concern or demand on the level of quality.

The certification period is the second important factor. The latest instruction determines that a new product must be certified within a year of mastering and for a more complex product this period is increased to 2 years. There is a statute stipulating that all newly developed products must correspond to the superior quality category. But it is not always observed.

The decree dated 12 July 1979 of the CPSU Central Committee and the USSR Council of Ministers intensifies the role of economic incentives and sanctions for the quality of products. Wholesale price increments for the Badge of Quality were also practised earlier, but the discount for second-category products is introduced for the first time. The mechanism of its future effect is not quite clear to me. As is well known, according to the instruction the enterprise is deprived of 50 percent of the profit from the output of products in the second quality category and, if the appointed time for their recertification into a higher category or removal from production is delayed, all 100 percent. However, the point is that according to the new statute state certification commissions examine only articles submitted for the Badge of Quality. The inclusion of products in the first and second category remains under the authority of sectors. We receive full information on the technical level and quality of all products only twice a year--from the official reports to the organs of the State Committee for Standards and the Central Statistical Administration. Of course, this can be reflected in the efficiency of use of sanctions for products in the second quality category and in their effectiveness.

M. A. Bol'shakov: The organs of the State Committee for Standards supply banks with this information, on the basis of which measures of financial and credit effect are taken. When second-category articles are produced in excess of the plan, we stop the issue of credit on raw materials and finished products. Thus, credit has an effect right now. We must intensify the control over the quality of articles.

Yu. A. Petrov: Unfortunately, it is difficult to intensify the control because it is ineffective.

A. G. Aganbegyan: What can be done? This is a very important question. How to affect the situation that has been created?

Yu. A. Petrov: In my opinion, it is necessary to keep quarterly reports. Then it will be possible to take more efficient measures.

V. I. Grebenshchikov: Enterprises work a great deal to shorten the time of development and mastering of new products. For example, there are articles that we design within 6 months to 1 year, in 1 or 2 years we master their production and are ready to deliver them serially. Then we have to spend just as much time on their certification and on the formulation of documents for it. At times it is necessary to receive up to 80 signatures. The materials can remain in every agency for weeks and sometimes even months... Therefore, at times one wonders whether it is worth exerting so many engineering efforts for preparation for certification. How do the organs of the State Committee for Standards view this and how do they think to help enterprises?

Yu. A. Petrov: Indeed, there are difficulties during certification. One of them is connected with filling out technical level cards for articles. Enterprises are not sufficiently provided with information on analogs of the best domestic and foreign products and often use obsolete analogs. It is hardly advisable to compare the level of products submitted for certification with them. Leading institutes and ministries should give enterprises the necessary information and facilitate the preparation of articles for certification.

Sometimes the time for the recertification of products is delayed. We are forced to return materials when not all the requirements for the additional technical development of articles are fulfilled. Indicators of materials intensiveness, technological qualities and production cost are improved, but such indicators as rise in reliability and durability are often bypassed by enterprises. The new statute increases the demands on reliability and durability.

A. G. Aganbegyan: Apparently, there is already or will be a planned recertification of all products with due regard for the new statutes.

Yu. A. Petrov: Yes, such work is done by associations and enterprises. However, on the part of ministries and departments there is no sufficiently effective methodological guidance of this work. It is to be assumed that it will be done more systematically and consistently after the development of lists of products subject to certification by sectors and their approval in the State Committee for Standards and the State Committee for Construction Affairs.

A. K. Vandyshev: What do the organs of the State Committee for Standards think of the fact that enterprises are forced to produce products not higher than of the first category only because they do not have the necessary materials to improve their quality? At our plant the Badge of Quality was awarded to most basic production articles, but we cannot certify goods for cultural and general purposes for the superior category, because the plant is not provided with stainless steel heating elements for electric hot plates. Why is help not provided by the organs of the State Committee for Standards in cases when enterprises are ready for the production of products on a higher level and are held back only by the lack of materials?

Yu. A. Petrov: In order to provide such help, the organs of the State Committee for Standards must have broader powers.

Yu. M. Kiselev: We must not permit a situation where the scientific and technical level of articles suffers because of a lack of coordination in supply. Yet it suffers from this. Take the pilot plants that should contribute to the most rapid materialization of scientific ideas. We try to do what depends on us. We succeeded in improving planning--a problem complex for experimental production and, judging from everything, troubling many allied enterprises. After the publication of my article on the use of the network methods of planning in the first issue of EKO in 1979 a total of 80 delegations from 40 cities in the country, from Riga to Vladivostok, visited us. We introduce automated control systems and automate the planning of industrial processes. But we do not even know how to approach the solution of material and technical supply problems...

A. G. Aganbegyan: The point also is that science is supplied among "other consumers." At first heavy and light industries and so forth and then "other consumers," including science, are supplied. Our journal wrote about the problems of supply for science in the seventh issue in 1980.

Yu. M. Kiselev: The plant manufactures a wide list of experimental articles and instruments, in which many different components and materials are utilized. Often small quantities (sometimes grams) are needed. Of course, it is difficult or even impossible to obtain them in a centralized manner. For example, who will give us allocations for ½ kg of tungsten a year? Therefore, we are forced to beg, to seek and to try very hard to get it. There should be forms of supply organization that would take into consideration the specific characteristics of consumers.

Yu. I. Tychkov: The present-day complex article is the product of activity of many enterprises. Its technical level and quality depend on suppliers of components to the same extent as on the manufacturing plant. The responsibility for deliveries and material and technical supply for production is not yet sufficiently great. This, in fact, is a very serious restraining factor.

Suppliers and Consumers: Conditions of Mutual Understanding

A. G. Aganbegyan: The decree envisages a system of measures to improve the work of material and technical supply bodies. Their transfer to cost accounting should have been completed in 1980. Mutual relationships with associations, enterprises and organizations will be based on economic contracts and mutual financial responsibility. The fulfillment of economic contracts and delivery plans becomes the main criterion of evaluation of their activity and the basic indicator for the award of bonuses. What changed in the last 1½ years? Are there perceptible changes?

V. I. Grebenshchikov: Radical changes are not felt. If, not fulfilling the plan because of supply bodies, associations could exact big sanctions from them, which would seriously affect their welfare, it would be a different matter. But so far all our claims are small pinpricks for them.

S. B. Sverdlik: Did you try to use all the measures and rights granted to you as a manager with regard to your suppliers and supply bodies? Perhaps you are afraid to spoil your relationships with them?

V. I. Grebenshchikov: Relationships with suppliers should not be disregarded, but not only they are involved. If on the basis of supply in full sets the supplier fails to deliver three instruments to me, I will think if it is worth bringing an action against him. After all, this is a long story. Even if the judgement is in my favor, I will benefit little from it as compared with what I will lose by not manufacturing expensive articles because of these instruments.

Yu. I. Tychkov: We exact about 70,000 rubles of fines annually. However, the missed production opportunities, unpaid bonuses and other losses are incommensurable with this amount. Therefore, with fines enterprises, as a rule, try to compensate only for the sanctions exacted from them. For example, we exact fines totaling 70,000 rubles annually and pay 30,000 to 50,000.

Yu. V. Ignat'yev: Nor do I attach special importance to fines. If we look at the balances of enterprises, we can see that in 98 to 99 out of 100 cases received fines coincide with paid fines. What, then, is their real force?

S. B. Sverdlik: There is a decree according to which the enterprise that suffered has the right to exact not only fines, but also the full amount of losses. Did anyone of those present try to use it?

Yu. I. Tychkov: We tried three times. We succeeded only once because of the naivete of suppliers. In all the other cases the matter reached the court of arbitration and every measure was used to prove to us that our claims were unfounded.

L. V. Stukalov: In difficult situations the manufacturer remains face to face with the supplier. The coordinating role of supply bodies, which should be organically inherent in them, is not felt. After all, almost the country's entire output passes through them to some extent. They relinquish this role and we feel this constantly.

Let us take the shipment of goods difficult to transport; for example, acid. All enterprises use a certain amount of it. Let us assume that the supplier can give a tank of acid. Supply bodies say: "Take it all." For our association and many other consumers such an amount of acid would be sufficient for more than 1 month. Should an acid warehouse be built for every enterprise? After all, this is quite a complex engineering structure, which we do not even have the right to design. The problem can be solved on a regional scale, but supply bodies do not want to deal with this.

S. B. Sverdlik: The supply problem should also be viewed from another aspect. A large amount of above-standard commodity stocks accumulated at enterprises. In Novosibirskaya Oblast as of 1 July 1980 these stocks were worth 74 million rubles, including stocks for which credit was not granted worth 40 million rubles. But we complain that there is a shortage of materials. If they are not needed, why should they be accumulated? After all, there is a procedure for the sale of unnecessary materials. If commodity stocks are not accumulated above the standards, the problem of shortage will not be so acute.

A. G. Aganbegyan: Why no one accumulates sugar at home? Because one can go to the store and buy it. But everyone tries to buy scarce goods for the future. Therefore, it should be a question of eliminating the shortage and of uniform supply.

S. B. Sverdlik: I agree. Balanced supply and production plans are needed. However, the standard needs of enterprises for stocks of materials should be determined. Everything that was accumulated in excess [illegible] should be sold in order not to increase the shortage in another place.

M. A. Bol'shakov: The trouble is that the standards of stocks are not substantiated scientifically. The production volume at enterprises has increased considerably, but the standards of commodity stocks remain the same. Therefore, precisely now, during the transition to new methods of planning and incentives, it is necessary to calculate standards for sectors and enterprises and to determine the source of financing, that is, budget, credit and so forth.

A. K. Vandyshev: Speaking of the responsibility for supply and deliveries, transport is often forgotten. Yet its role in the fulfillment of deliveries is tremendous. Unfortunately, it turns out that the contract with the enterprise does not commit the railroad to anything. For example, according to the agreement with the railroad we should receive 500 containers a month, but we are given 300. We argue that this does not ensure the delivery plan. Attention is not paid to this. At best we manage to come to an agreement with the help of local party bodies. In general, it is difficult to come to an agreement about a regular and prompt delivery of empty railroad cars. As a result, we are fined for layovers. We cannot use sanctions for an irregular delivery of railroad cars.

Yu. I. Tychkov: Shifting the responsibility for transport workers, for supply and sale bodies and for banks to the shoulders of enterprise managers is a departure from state discipline. The plant manufactured products--this means that it fulfilled its state functions. Other organizations should fulfill theirs. But now finance, supply and sales workers of enterprises sit besides telephones and teletypes, beg that the delivery of accessories be sped up and call up and question clients whether they paid for the products and whether the submitted bill went through bank operations during the finished month. Someone did not deliver materials or manufactured products, someone did not pay the bill, someone did not perform a bank operation on time, the enterprise is responsible. An increase in contractual discipline and responsibility should be ensured by a more efficient system of economic effect.

Yu. V. Ignat'yev: I think that suppliers' troubles will be lightened to some extent owing to the compulsory extension of loans to insolvent enterprises for payment for products with a subsequent collection of interest envisaged by the decree.

Our clients are mainly textile enterprises, for which we manufacture automatic shuttleless looms. Sometimes they themselves overestimate their capabilities in the purchase of equipment, ordering it "with a reserve," and sometimes the USSR Ministry of Light Industry, which does not promptly open the financing of capital investments, puts them in a difficult position. Whatever the cause of nonpayment of bills, we are the ones to suffer. I hope that the compulsory extension of loans will be a disciplinary measure.

V. I. Grebenshchikov: Every association or enterprise appears in two roles at once: For some we are suppliers and for others, consumers. Therefore, everyone is interested in seeing to it that the responsibility for the fulfillment of the economic contract is ensured for both parties. It seems to me that the fulfillment of economic contracts should become the main criterion of evaluation of enterprise activity along with the fulfillment of the products list plan. These indicators reflect the role of specific production in the national economic complex. Of course, evaluation according to sales would be insufficient and not objective. After all, it characterizes only the financial aspect of enterprise activity. However, is it sufficient to replace it with normative net output? Normative net output has many indisputable advantages. It objectively reflects the real labor contribution of a certain collective to the production of products and the level of labor expenditures and gives a true picture of the rates of labor productivity growth calculated on its basis. To be sure, the indicator of the standard of wages per ruble of output is also good. However, it is possible to work well according to net output, to observe the wage standard, in connection with this to be considered an advanced enterprise, to obtain economic incentive funds and not to fulfill its basic task--deliveries of products necessary for the national economy. Therefore, it is necessary to very strictly develop the mechanism of responsibility for the fulfillment of economic contracts.

Normative Net Output: Time of Mastering

A. G. Aganbegyan: In itself one indicator of plan fulfillment with due regard for deliveries will not solve the problem. The entire set of measures envisaged by the decree dated 12 July 1979 of the CPSU Central Committee and the USSR Council of Ministers should be realized. This includes incentives for the production of the entire assortment of articles, increase in the role of physical indicators, use of normative net output, which takes away the interest in the production of materials intensive articles and makes it possible to judge the true contribution of enterprises to the production of products and many other measures. How does their realization proceed?

Yu. V. Ignat'yev: Most often underdelivery of products occurs not for objective reasons, but because it is not profitable for an enterprise to manufacture some article. I also believe that the introduction of normative net output as the basic value indicator will be an important measure increasing the interest in the output of any articles. For 10 years we have experimentally used this indicator, true, along with gross output. Nevertheless, net output enabled us to realistically evaluate the true labor expenditures and to lower materials intensiveness.

The previous methodological directives for the formation of the standard of net output gave a less accurate picture than the latest directives published in EKONOMICHESKAYA GAZETA on 12 September 1979. However, this instruction also has points, which, in my opinion, need to be specified. The first is connected with the level of supply in full sets. Two enterprises manufacture the same articles. One of them receives 70 percent of the parts on the basis of cooperation and the other manufactures almost everything with its own forces. Supply in full sets comprises 10 percent at this enterprise. The price of articles is the same, but the expenditures of their live labor differ considerably. How will the average sectorial standard be introduced in this case? True, in such cases ministries and departments are permitted to differentiate normative net output. I don't know how this will turn out. The problem is very complicated, particularly for small-series and individual production, especially as the level of supply in full sets in machine building differs quite often.

The standard of net output should be stable and it should be established for a 5-year period. However, the level of supply in full sets can change in production for some reasons. How will this be disclosed? A superior organization cannot always see and know about these changes. Furthermore, as long as departmental interests are above all, even when it notices them, it may keep silent.

According to the new instruction normative net output is determined as follows: The wages of basic workers are taken, the wages of all other workers are calculated with due regard for the coefficient and the standard of profit is added. However, at machine building enterprises production facilities are of such a varying nature that the number of basic workers in the first production facility can have a ratio of 3 to 1 with respect to the rest and in the second production facility, of 1 to 3. We take this into account in our experiment. In order that the indicator of normative net output may be more objective, it is necessary to stipulate this in the sectorial instructions of the ministries where the varying nature of production facilities is felt especially.

V. A. Ovchinnikov: It seems to me that normative net output does not eliminate the varying profitability of articles. We now develop materials according to normative net output and a number of problems surface. The level of profitability of various articles differs 10 to 12 percent. Therefore, it is more profitable to manufacture those whose standard of profit included in normative net output is higher.

Here is another example. Furniture workers have great difficulties with raw materials. Therefore, we now use waste, do not return inferior raw materials to the supplier and process them, disregarding additional labor expenditures. Will it be possible to find wages for these purposes under the new conditions? After all, the standard is established when the wholesale price of an article is approved. This is a serious difficulty. We tried to attract the ministry's attention to it. but have not yet received an answer. Quite a large number of enterprises work according to normative net output. Apparently, it is advisable, before 1982, prior to the introduction of new wholesale prices, to take the experience of these enterprises into account and to introduce the appropriate refinements in the method of calculating normative net output.

A. G. Aganbegyan: There are no ideal indicators. One cannot say that normative net output is free of all shortcomings. However, normative net output has one big advantage. It does not stimulate an increase in materials intensiveness. This is a great thing. The indicator of gross output was abolished in Hungary in 1968. As a result, in a year the volume of net industrial output rose 8 percent and the amount of material expenditures was reduced by 3 percent, whereas during previous years the amount of material expenditures increased more rapidly than the volume of net output, because it was profitable for enterprises to twist and twist materials intensiveness.

A great deal was said here about problems connected with the calculation of the standard of net output. In fact, it is difficult to calculate normative net output and even more difficult to check whether it was calculated correctly. This is not the sales volume. It will also be very complicated to control it. In order that this may not lead to what many innovations lead, it is necessary to examine at great depth the results of the economic experiment in normative net output.

Organization of Brigades Is Not a Simple Problem

A. G. Aganbegyan: I would like to hear how are such important potentials for increasing labor productivity as brigade methods of work utilized at your enterprises.

A. K. Vandyshev: At our plant 91 percent of the workers of basic shops are involved in collective forms of labor organization. Two overall brigades in turbogenerator production were established at the end of 1979. During the first half year of 1980 labor productivity in these brigades increased by 15 to 18 percent. The indicator was very good. We decided to establish two more overall brigades. However, when organizing overall or integral process brigades for finished output, it is necessary to envisage a whole system of measures. Here is one example. We established a brigade which, externally, according to all signs, operated normally. However, when we looked more closely, it turned out that it was necessary to assemble equipment in a different way and to replan work places, that is, it was necessary to make engineering preparations for the establishment of this brigade.

Now about the leader in a collective. This is a very important psychological factor. Today's brigade leader should be trained at the highest level. At times his authority should be higher than the authority of a foreman. Therefore, it is necessary not only to successfully select brigade leaders, but also to see to it that they are trained for the performance of the functions of the leader in a collective.

L. V. Stukalov: At our association 49 percent of the workers are involved in all forms of collective labor organization. Labor productivity grows more rapidly in the association's brigades. The rate of its growth is 41 percent, while the rate of growth of wages is from 3 to 5 percent. Furthermore, labor discipline increases and the adaptation of young workers is more rapid. Then what holds us back from a more rapid development of brigade forms? I will mention two factors. The first is psychological. It is not that we cannot find leaders. We have quite skilled and educated personnel. In preparatory and metalworking shops there are about 1,500 technicians and many engineers among the workers. However, people became used to working individually and fear collective wages. Even in such a shop as the television assembly shop, where the conveyer regulates production flow and makes everyone work uniformly, a person with a certain skill level does not want to share his labor with less skilled workers despite the coefficients of labor participation. He feels his advantages and is afraid to lose them.

Material and technical supply is the second factor. It has an especially great effect in assembly shops. The plant has many products lists and a developed external and internal cooperation. When a person works individually and cannot complete an assembly because of the lack of accessories, we still close his order and pay his wages. If this is done in brigades, the whole point of collective work will be lost.

B. V. Galun: We also feel the psychological factor. Five- and six-category workers ask the following question: "Why are we under the same conditions as those who came 2 or 3 months ago?" We explain, convince and prove that the skill and workmanship level is taken into account by the coefficient of labor participation. However, I think that we cannot solve the problems of brigade wages by means of the coefficient of labor participation alone. The shortcomings existing in technical standardization, its long-term direction toward the standardization of individual labor and the complexity of planning and recording the labor of workers in service production facilities create serious obstacles to the development of collective forms of labor organization. More specific and detailed normative acts for brigade forms are needed. Of course, an informal, creative participation of enterprise engineers and economists in the establishment of brigades is needed, because the level of planning assignments for every brigade, the level of organization and technology and many other things depend on them. Therefore, we do not rush to increase the number of brigades, but are concerned with the problems of their engineering support.

V. I. Grebenshchikov: Engineering support presupposes the solution of many problems, including improvement in processing methods and development of devices and mechanisms, which will contribute to an increase in the labor productivity of brigades and decrease in labor intensiveness. A serious engineering innovation should end with a decrease in labor expenditures and, therefore, a revision of norms. How does a brigade react to a revision? With individual methods of labor organization these problems are solved more simply than when one has to deal with the collective.

V. A. Ovchinnikov: We have noted that, if something new is introduced, norms must be revised promptly. If this is done a posteriori, nothing good will come of it. We try to more rapidly introduce an innovation into production and to obtain a return on it. Let us assume that a brigade manufactures a chair and the wages for the entire production cycle are 1 ruble 20 kopecks. A planning and design office makes nonstandard equipment, owing to which work will be mechanized and labor productivity will increase in certain operations. We explain to the brigade to what the decrease in labor intensiveness will be due and the collective changes over to new norms. As long as everything was like that there were no difficulties.

Remark: As long as there are reserves, there are no difficulties. When they end, complications are inevitable.

The Title of Engineer Imposes Obligations

A. G. Aganbegyan: It has long been established that innovations do not come easy. For example, the introduction of the system of the Volga Motor Vehicle Plant proceeds with great difficulty at enterprises. It would seem that there was nothing simpler than what was done at the Volga Motor Vehicle Plant. But no! Quite a different level of organization and standard of production and higher skills of personnel are needed. Like any sensible and serious matter, the adoption of brigade methods also needs extensive organizational work. As was rightly said there, a mechanical combination of people into brigades does not give much. The role and responsibility of engineering services have increased immeasurably. But this responsibility has not been always supported by the system of wages and occupational advancement of specialists. The problem of efficiency of engineering labor has been often discussed recently. Apparently, in the practical activity of collectives there is experience in its solution, there are searches and finds and suggestions are made. It would be useful to discuss them.

B. V. Galun: At our plant one out of three workers is an engineer or technician, because our instrument making and instrument repair production is combined with experimental production of standard instruments for the control of the quality of output. In cooperation with the Novosibirsk Institute of the National Economy we are working on the regulation of the functions and evaluation of the labor of engineering and technical personnel. We tried to describe all their functions in services and structural subdivisions and to coordinate the award of bonuses with their performance. There is already some benefit.

I admit that I had prejudice against the work of engineering and technical personnel. It seemed that people lost their responsibility for the work entrusted to them. However, when the responsibility was specified owing to the regulation of functions, the situation changed markedly for the better.

L. V. Stukalov: We are also disturbed by the problems of efficiency of engineering labor. The association has long felt the restraining effect of tool production, not because it is weak, but because the design office, which designs accessories, dies and molds, worked inefficiently. Having suffered for about 3 years, we adopted the following measure: We transferred the designers of accessories and dies to piece-rate wages. I cannot say that all the problems have been eliminated. There are difficulties, including such objective difficulties as the lack of people, but we managed to solve the main problems. With the wage and bonus system we interested designers not only in designing, but also in rapidly manufacturing accessories. If errors are detected in the sketch, the designer right away investigates the matter in the shop and makes an immediate decision. The interference of the division manager is not even needed.

A. K. Vandyshev: The level of engineering work depends on the quality of training of specialists in higher educational institutions. It seems to me that it has become somewhat lower. Young specialists have enough technical knowledge, but not enough efficiency, organizational abilities and enthusiasm for their work. Nevertheless, apparently, it is not only a question of higher educational institutions, but of the fact that the occupation "engineer" is a mass occupation. On the one hand, its prestige has declined and, on the other, wages increase slowly and an engineer receives less than a skilled worker. A total of 10 percent of the graduates of higher educational institutions do not at all appear at the places of their appointment. This figure puts us on guard: One out of 10...

L. P. Samokhin: Young engineers arrive from institutes, not having skills in organizational work. We arrived at this sad conclusion as a result of many years of observations. This shortcoming is very noticeable in the work of such planning-technological and scientific research institutes as ours, when it is constantly necessary to associate with customers. We begin instructing young specialists in problems of management from the very beginning and, at the same time, with all the means at our disposal we raise their responsibility for the work entrusted to them. We try to convince them that an engineer should earn his wages, not receive them because he graduated from an institute,and we have created a system for the control of the efficiency of engineering labor.

In general, recording engineering labor is a very complex problem. Those who deal with it in real earnest have certainly felt it. Many managers are now engaged in it. At first, when the new methods of planning and recording were introduced, a serious psychological barrier had to be overcome. Intensification of control evokes dissatisfaction not only among young engineers, but also among experienced skilled specialists, because, where they worked previously, there were no strict recording systems. Now every specialist at the institute receives a specific assignment and the award of bonuses depends on the results of its fulfillment.

The Role of the Labor Contract Should Be Increased

A. K. Vandyshev: Unfortunately, we try to solve the problems of management of both engineering and working personnel through wages alone. But in this way we can lose the key to the management of labor resources and strain wages. Of course, other social and economic levers are used. We build housing, children's institutions, swimming pools, stadiums and rest areas and improve working conditions. However some have more possibilities for this and others, less; for example, medium-size and small enterprises. People will move from place to place and go where the situation is better. When a person leaves an enterprise, he leaves a number of unresolved problems and the national economy incurs losses. According to the latest decree on an increase in labor discipline and decrease in personnel turnover a worker must give 1-month notice of his resignation. However, after he decides to leave, in practice, there is no more return from him. He only serves during that month. It is not difficult to imagine that the losses from personnel turnover run into a substantial figure.

A. G. Aganbegyan: What would you suggest that we do to improve the utilization of labor resources? The decree dated 12 July 1979 gives associations and enterprises the right to pay a wage rate increment from the savings of the wage fund. Incidentally, for designers and process engineers, as well as for skilled workers, this increment can comprise up to 50 percent of the wage rate. A set of measures for an increase in labor discipline and decrease in personnel turnover has been envisaged in the decree. What other methods and forms of personnel retention should be used?

A. K. Vandyshev: I believe that a person who breaks a labor contract on his initiative should not receive wage increments. After all, he breaks a contract when he has the clear hope that he will receive 5 or 10 rubles at the neighboring plant. He should earn this increment. When coming to a new enterprise, he cannot fully give a return immediately. He must get used to new production and adapt himself under new working conditions and, what is especially important, in the collective. This means that his wages must also be lower. This does not apply to cases of transfer to other enterprises because of production needs, move owing to family circumstances and other valid reasons.

I also believe that employment offices should be in charge of the distribution and move of labor resources in a region. Their role should be enhanced.

A. G. Aganbegyan: Again I would like to refer to the Volga Motor Vehicle Plant. In the system of labor organization and wages at the Volga Motor Vehicle Plant there can be no unsubstantiated award of high categories. Improvement in occupational skills and holding two jobs, along with the fulfillment of the standardized assignment and attainment of a high quality of output by the brigade, are the basic wage components. Collective forms of labor organization in basic and service production and a very efficient system of wage organization enable Volga Motor Vehicle Builders to avoid many negative phenomena, which occur in an individual piece-rate system.

Now every worker controls expensive things--machine tools and mechanisms--and participates in an expensive industrial process. A great deal depends on his skills and competence. The resignation of every person costs a great deal. It is one thing when he is a digger with a shovel and another when he is an excavator operator who has received training for several years and who has no replacement nearby. I think that the proposals to enhance the role of the labor contract expressed here are of definite importance. What is done in the north? A contract is concluded for 3 years. In accordance with it a northern increment is paid, an additional leave is given, a preferential pension is provided and so forth. If a person leaves, he is deprived of all increments and privileges, that is, the demands on both parties are very clear. People leave all the same, but this happens much more rarely. If there is experience in northern contracts, why can it not be introduced in other places? There are no northern privileges, but there are others which can be used judiciously within our labor legislation.

Are Economic Staffs of Enterprises Ready for Innovations?

A. G. Aganbegyan: Economic services of enterprises have the responsible role of staffs in the introduction of new indicators and in all work on improvement in the economic mechanism. They accumulate all external information--all normative acts and instructions. They receive initial data from plant subdivisions. They form documents according to which enterprises will operate subsequently. How do economic staffs feel at this busy time? How are they doing?

N. I. Mirgorodskiy: Improvement in the economic mechanism requires extensive organizational work. It is entrusted primarily to chief economists, heads of economic planning, labor and wage divisions and chief bookkeepers. It is necessary to encompass all the levels of production--then this work will be efficient. We have organized a study in the system of economic education of all the main points in the decree dated 12 July 1979 of the CPSU Central Committee and the USSR Council of Ministers and are engaged in work on improving intraplant cost accounting as applied to the new requirements. We are changing some evaluation indicators in the light of this decree. In 1980 the plant was transferred to the planning of wages per ruble of output. We assigned and approved wage standards for all shops.

The issue of the decree coincided with the development of the plan for new wholesale prices of products for production and technical purposes. We have an enterprise with many products lists. We have already developed about 800 plans for prices of articles and, at the same time, a standard of net output for each. In addition to this, the program for the 11th Five-Year Plan and for 1981 was studied. There was a vast volume of work and a vast flow of information. At another time I could have not analyzed this flow. But now, when it is so concentrated and, of course, I would like to orient myself better in it, but there is not enough time, I see that the information file is superfluous. Part of it is unnecessary. The number of planned indicators and various statistical forms has increased. For example, the technical, industrial and financial plan contains 143 pages of forms A technical passport, whose volume is also large, has now appeared. When we compared these two documents, we saw that they did not differ much. It seems to me that it is necessary to assign minimum indicators, which would enable superior organizations to form an idea of the economic activity of an enterprise, help us in daily work and give the manager the necessary information on his level.

A. S. Narinskiy: Indeed, the flow of economic and managerial information is large. It should be analyzed and on the basis of this immediate decisions should be made. But at enterprises recording lags and is not current. As a well known finance worker said, we receive posthumous costing. Work on increasing the operational efficiency and analyticity of recording and on intensifying the controlling effect is now done under the auspices of the Ministry of Finance. I am a member of the ministry board and participate in this work.

Recording should be mechanized. Our industry produces sufficient equipment for its mechanization. However, a great deal rests on the lack of programs, on the skills of personnel and on teaching them mechanical methods of recording. The bookkeeping and economic services of enterprises engaged in recording do not know all the possibilities for the mechanization of recording. Those who are engaged in its mechanization are not informed of the demands of economic workers. It is like a talk between a blind man and a deaf man.

The training of engineering personnel was discussed here, but the same problem also exists with regard to the occupation of bookkeeper. Its prestige has declined. Young people do not want to work at this job, although it is exceptionally important. It is necessary to enhance the prestige of this occupation in the maximum possible way. The right to a second signature after the manager on all financial documents is of vast importance. I became familiar with the study plan of one of the schools of management in France. There tremendous attention is paid to bookkeeping disciplines. In our country this course is not offered to managers. Perhaps that is why many enterprise managers underestimate the role of bookkeeping services and the role of recording.

N. I. Mirgorodskiy: You are right. Today recording lags and, moreover, it does not accomplish the main task set for us--it does not give immediate analytical data. The results become known after the end of a quarter, a month and a longer period under review. However, such an organization of recording is envisaged by all methods and instructions. It was very gratifying to hear that the Ministry of Finance is engaged in an improvement in methodological documents. It is desirable to take the specific characteristics of sectors and even subsectors into account in the new methods.

The Manager: Rights and Responsibility

V. I. Grebenshchikov: I would like to go back to Nikolay Ivanovich Mirgorodskiy's thesis on the number of planned indicators. There are many of them. The work of our economic staffs, as well as ours, is complicated because of this. If a manager could be in charge of the production and sale of above-plan and unplanned products and resources, the economic activity of an enterprise would be improved. For example, we saved 1,000 tons of metal. I cannot sell it and I cannot give it to my neighbor on a mutual basis or in exchange for needed materials. What is left? To telephone the State Committee for Material and Technical Supply? However, it is doubtful whether a daredevil, who would give up saved metal, will be found. It is another matter if at my discretion I could produce above-plan products from saved materials, or exchange them for something that the association needs more and the neighbor has in abundance. Both production and the national economy would not be at a disadvantage. In order to systematically and strictly fulfill the measures envisaged in the decree, it is necessary to expand the economic independence of enterprises and associations.

B. V. Galun: There is no doubt that the decree dated 12 July 1979 of the CPSU Central Committee and the USSR Council of Ministers is a new step in the management of the national economy and in the improvement in planning. However, in some cases there is an excessive detailing of indicators and a regulation of the economic activity of enterprises. Let us recall what happened with the positions of foremen not long ago. They belonged to the administrative and managerial personnel. We worked till we reduced almost all foremen. A decree that rectified the situation was issued 3 years ago. It determined that a foreman--direct production captain--participates in the process of production and does not belong to administrative and managerial personnel. On the basis of the plant's specific characteristics we calculated how many workers should be subordinated to a foreman. It turned out to be 25 to 30. We have more. But we did not begin increasing the number of line managers, because they coped with production management. I want to say that a director will not increase the size of the engineering and technical personnel if there is no need for this. If many millions of rubles are entrusted to an enterprise manager, then he could be fully entrusted with the handling of the administrative and managerial personnel.

Excessive restrictions make it impossible to manifest initiative, flexibility and maneuverability in production and economic activity.

S. B. Sverdlik: The present attitude toward cost accounting is not quite correct. Any enterprise gives money to the budget with one hand and receives it with another. Such countertransfers of money weaken the responsibility for the fulfillment of the financial plan, on the one hand, and make enterprises dependent on how promptly planned expenditures are financed from the budget.

Enterprise managers have grown so much that they can be fully entrusted with handling their income. Only if for some reason the expenditures of a given enterprise (including capital expenditures) exceed its income, it should receive financing from the budget.

Yu. I. Tychkov: I believe that the stability of standards should guarantee the rights and possibilities of enterprises. This is a very good and important point of the decree. The question of its legislative consolidation is fundamental. After all, what is still done? At first, a partial change, then another partial change and then it is prolonged to 1 year... Faith in stability is lost and the enterprise loses the incentive to earn large funds. This happened to us during the 10th Five-Year Plan. We reserved economic incentive funds for the acquisition of machine tools with digital program control (production development fund) and for the construction of a preventive clinic, believing that once they are stable, we will be able to use them at our discretion. But they were withdrawn, leaving us on the "shore."

V. I. Grebenshchikov: The fund for social and cultural measures was left at our disposal longer than others. We had the possibility of building houses by the economic method at the expense of this fund. Now it has been taken away. The decree establishes the principles of stability of standards and the recording of plan fulfillment and of fund formation in a running total, but for enterprise managers this is always connected with a risk. The sectorial ministry annuls one part of the fund, the Ministry of Finance, another and the State Bank, still another.

A. K. Vandyshev: We have reason to fear that stability can be disrupted. The wage fund, which at our plant should have been calculated depending on the fulfillment of the plan for the volume of commodity output in comparable prices with due regard for the consumer's economic efficiency, was changed in 1980.

A. G. Aganbegyan: Were the standards determined for subsequent years?

A. K. Vandyshev: This is the point, no. If they had been established, we could have forecast our possibilities. But for now we cannot use this lever. Therefore, managers are so interested in a clear legal consolidation of stable standards.

Yu. I. Tychkov: I would like to discuss another very important problem. Everything that is stated in the decree can prove to be insufficiently effective if responsibility is not sharply increased at all levels--from the worker to the minister. For example, legal responsibility for contractual discipline should be strengthened with significant material sanctions not only with regard to suppliers, but their service sphere--transport workers and bodies of the State Committee for Material and Technical Supply. The enterprise manager should also be responsible, not at the expense of the enterprise, but personally.

The responsibility of the staff of ministries and departments can be increased by the introduction of the principles of incentives and wages used at the Volga Motor Vehicle Plant: division of wages into two parts, that is, permanent and variable, which should be earned by the fulfillment of appropriate obligations during appropriate periods. As long as every worker does not feel personal responsibility, it will be difficult to advance.

A. G. Aganbegyan: In fact, for a number of items the number of planned indicators increase; for example, for the mechanization of manual operations. On the other hand, rights in the area of labor and wages are extended considerably. It is very significant that the savings on the wage fund will not be withdrawn now. The stability and legislative consolidation of rights and responsibility are now very important. What happened every year, when a manager did not know whether money will be withdrawn or not, when and if it will be given in general, did not contribute to an increase in production efficiency.

In the new economic system of management the five-year plan becomes the main form of planning and the basis for the organization of economic activity. Its fulfillment will be evaluated in a running total from the beginning of the five-year plan and economic standards should become permanent and stable. This will be the basis for the expansion of the real rights of managers.

In conclusion I would like to discuss problems, which disturb me most of all, in the practice of realization of the decisions on improvement in the economic mechanism. The new methods are based on an intensified role of the five-year plan, that is, its stability, substantiation and balance. Thus, the scientific substantiation of planning appears as the main condition for efficiency. A great deal is now done to improve planning. However, is this sufficient for the plans of the overwhelming number of associations, enterprises and organizations to be, in fact, substantiated and coordinated with the resources and capabilities of every collective? We must strive for this.

Many interesting suggestions were made during the round table discussion. We hope that their publication in the journal will attract the attention of the organizations and departments concerned.

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SUPPLY, WAREHOUSING DISCUSSED BY EXPERTS

New Approaches to Warehousing Suggested

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian

No 1, Jan 81, pp 106-112

[Article by A.I. Baskin, candidate of economic sciences, deputy director of the USSR Gossnab Scientific Research Institute of the Economics and Organization of Material and Technical Supply: "Supply and the Development of Warehousing"]

[Text] The continuing processes of production in the sphere of circulation are occupying an increasing place in the system of material and technical supply. It is precisely here that we face the most complex and crucial tasks in raising the level of services for consumers and the producers of the means of production.

Warehouse Supply: Not Only Circulation But Also Production

The development of warehousing in today's sense of the word makes it possible to solve one of the main problems in the rational utilization of material resources by an enormous number of consumers, and also to provide enterprises with the essential means of production with minimum stocks. One effective way to solve the problem is to change the economic structure for reserves of production and technical stocks by means of planned reductions in the ratio of production stocks. At the same time the ratio and role of commodity stocks which compensate for the disparity in time and production regimes and consumption, are increasing. This conclusion is confirmed by practice.

Thus, during the period 1966-1970 there was an intensive increase in the proportion of stocks concentrated at warehouses in the general state supply system, and circulation of total stocks within the national economy was noticeably accelerated. And during the periods when the process of stock concentration in the supply sector did not take place sufficiently rapidly, the rate of turnover also slowed down. Consequently, the problem is to effect a purposeful acceleration in the growth of that part of total material reserves that it is expedient to concentrate in the sphere of circulation for the means of production.

About one-third of wholesale commodity circulation in the supply sector now takes place in the form of deliveries from bases and wholesale stores. The ratio of warehouse deliveries of petroleum products is especially high (about 80 percent), along with agricultural equipment (more than 90 percent of wholesale turnover in the USSR State Committee for the Supply of Production Equipment for Agriculture system). On the whole, however, warehouse supply has still not reached an economically expedient level.

In the long term its significance will not be lessened since simultaneously with the concentration of production under the influence of scientific and technical progress, the product range for items required in small batches will expand. Moreover, the freight-carrying capacities of equipment for transporting output, including containers, will rise. The rapid rates for the economic development of the northern and eastern regions of the country, where natural and geographic conditions predetermine the predominance of this method of transportation, constitute an important factor in the further development of warehouse supply.

When planning the development of the sector infrastructure, it is necessary to be oriented both on the consistent concentration in it of traditional kinds of activity and on the mastering of qualitatively new functions that promote an acceleration in the growth of efficiency in social production. In particular, it is necessary to organize the "overflow" of some functions from production into material and technical supply.

Domestic and foreign practice confirm that the transfer of a number of initial and finishing operations to supply-and-marketing enterprises, the concentration of the functions of other sectors serving production and the assignment of overall services to enterprises, including the fulfillment of certain production and transportation operations, substantially enhances production efficiency. In essence, supply-and-marketing enterprises are transformed into combined facilities where circulation activity is closely interwoven with production functions. Consumers derive benefit in the form of savings on materials, demand for fixed capital is reduced, and worker labor productivity rises.

One feature of supply, as in other sectors of the intrastructure, is that improvement in the quality and efficiency of its work is seen primarily in the better utilization of reserves in the sectors directly engaged in output production. Thus studies conducted at the Scientific Research Institute of Economics and Organization of Material and Technical Supply established that expansion of warehouse supply for consumers up to economically expedient scales provides a national economic saving of R60,000 per R1 million of growth in warehouse deliveries. Production stocks are reduced and capital investment is recouped in about two years.

The organization of rational economic links between supply-and-marketing enterprises in order to expand the range delivered to consumers from production warehouses provides a savings of R20,000 to R420,000 per R1 million of subclassified materials, depending on the kind of economic link. Consumers save 125 tons of rolled metal from each R1 million of subclassified ferrous metals. The time taken to recoup capital investment is less than one year.

For each R1 million of ferrous metals prepared for production demand at warehouses in the material and technical supply sector there is a saving of R90,000; figures for other products are as follows: nonferrous metals, R60,000; paper products, R160,000; cable articles, R50,000. Some 450 tons of rolled ferrous metal, 80 tons of nonferrous metals, more than 450 tons of paper products, and 60 tons of cable articles will be saved. The time taken to recoup capital investments in the organization of production preparation for different kinds of output is from several months to two years.

The Material Base for Supply.

A decisive condition for the successful operation of the supply sector is the growing economic potential of enterprises and organizations specializing in the circulation of the means of production and the reinforcement of their material and technical base. Here, the development of warehousing for material and technical supply organizations should be planned as an essential part of warehousing in industry, construction, transportation and other sectors of the national economy.

Warehousing has a leading role in solving one of the most important economic tasks—storage of production output. During the course of a year industrial output for production-and-technical purposes and an enormous amount of agricultural raw materials, worth together more than R450 billion, pass through the warehouses. At the beginning of 1979, goods worth R109 billion, or 14 percent of gross output for the sectors mentioned below, were being held in the supply-and-marketing warehouses in industry, construction, transportation and communications, and in the material and technical supply bases and wholesale stores. The storage of these valuables, their processing with minimum material and labor expenditures, and insuring conditions for rapid rates of turnover of stocks in the national economy represent a substantial contribution to the intensification of the socialist economy.

The development of warehousing on an industrial basis requires considerable capital expenditure but it does provide an opportunity for releasing workers engaged in loading and unloading operations and eliminating heavy manual labor, and for rapprochement between the occupational and cultural levels of workers in warehousing and in basic production. If the orientation is toward the creation within the Gossnab system of permanent warehouses for supplying construction instead of temporary places for storage at construction trusts, the total expenditures on raising the capacities of warehousing can be reduced by a factor of at least 1.5. Moreover, the same warehouses are then used for supplying current production needs. This kind of experience was first gained during the construction of industrial and housing sites in Naberezhnye Chelny, where the USSR Gossnab set up the Kamsnab Administration as part of the general state system of material and technical supply. During the past decade, in order to improve warehousing, a great deal has been done in the sphere of material and technical supply. Thus, during the 9th Five-Year Plan, 3.2 million square meters of warehouse space were commissioned in the USSR Gossnab system alone, and existing warehouses were reconstructed and technically reequipped, which brought another 1 million square meters of premises into use. The relative redundancy of workers through mechanization and automation of labor was 50,000 persons. Major measures to improve warehousing are being implemented by the USSR State Committee for the Supply of Production Equipment for Agriculture, the Ministry of the Automotive Industry, the Ministry of Tractor and Agricultural Machine Building, the RSFSR Gossnab and other ministries and departments.

The organizational and technical level of warehousing, however, still lags behind the requirements of present-day production. In terms of its throughput, the existing network of supply-and-marketing bases and stores does not make it possible to achieve the volumes of warehouse supply needed to form a rational structure for the product range or for its delivery to consumers in economically suitable batches. The ratio of materials delivered from warehouses in a form ready for production consumption is low.

The level of mechanization and automation in loading and unloading operations does not insure the necessary labor productivity for warehouse workers. The achievements of scientific and technical progress are being introduced into warehousing noticeably more slowly than into production. Thus, analysis of warehousing for 12 major plants in the heavy and transport machine building industry showed that because of the low technical level, warehouse capacities were being used only 30-40 percent. The degree of mechanization for warehouse operations does not exceed 16 percent, which is four times lower than in basic production. About 150 warehouse structures and buildings could not be reconstructed and were demolished.

As a result of the low capacities of warehouses and stores, and their inadequate height and irrational siting, and the low level of technical equipment, extra operating costs are incurred. Each year, losses are valued at about R1 billion in the organizations of material and technical supply alone.

The Future of Warehousing.

Decisive measures are needed to substantially improve warehousing as the material supply base. The following should be envisaged in plans for economic and social development:

the construction of large industrial-type warehouses with comprehensive mechanization and automation of loading and unloading operations and with central control for warehousing processes;

the creation of warehouse capacities enabling the delivery of materials and articles to consumers in rational batches, in the required range, and within the periods as close as possible to consumer schedules for production reserves;

the introduction of new principles for organizing warehousing, including combining stores for major industrial complexes with warehousing in the general state supply system, and setting up warehouses for collective use designed for the storage of stocks for enterprises belonging to different sectors and departments;

the creation at warehouses of conditions insuring that output can be stored in accordance with standards laid down, including the maintenance of the microclimate, fire hazard precautions and so forth;

the delivery of output from bases and stores with a high degree of technologic preparation and a considerable increase in the volume of additional services of a production nature offered by supply and marketing organizations to consumers;

the equipping of warehouses with up-to-date control and measuring equipment making it possible to guarantee the quality of output dispatched from warehouses;

the rational siting of warehouses on the country's territory in a unified scheme taking into account the prospects for the development of production forces in the economic regions;

the creation of the kinds of social and everyday conditions that would insure normal working conditions and work safety and the prestige and attractiveness of working in warehousing;

a substantial increase in the ratio of the active part of fixed capital in warehousing.*

The Comprehensive Approach.

Questions of developing warehousing have become a major national economic problem whose resolution presupposes a comprehensive, long-term approach on the basis of a purposeful, long-term program. The basis for its preparation could be a system of decisions providing for the comprehensive development of warehousing in the sectors and subsectors of material production, taking into account the development of joint sectors of the economy. The present practice by which each ministry and department and each sector organizes warehousing in isolation from everyone else does not provide the desired effect.

The USSR Gossnab and the Interdepartmental Commission on the Comprehensive Problems of Warehousing have confirmed a coordinated plan for creating a purposeful, long-term national economic program for the comprehensive development of warehousing in the country through the year 2000. Some 56 sector scientific research and design institutes headed by the USSR Gossnab Scientific Research Institute for Economics and Organization of Material and Technical Supply are participating in drawing up this program. Within the framework of the initial stage, investigations are being made on the status of warehousing, and the Ministry of Heavy and Transport Machine Building, the Ministry of Tractor and Agricultural Machine Building, the Ministry of the Shipbuilding Industry and the Ministry of Machine Building for Light and Food Industry and Household Appliances are at the same time providing certification documents for equipment in plant warehouses.

Material and technical supply can work with good results only when its activity is synchronized with the work of transportation (almost 70 percent of all costs in the organizations of material and technical supply are made up of transportation expenditures) and when it is reliably serviced by up-to-date means of communication. On the other hand, improved quality in the work of material and technical supply acts as a major reserve in improving transportation activity. It is known, for example, that the drawing up and fulfillment by supply and marketing organizations of optimum plans for the administrative attachment of consumers to suppliers reduces the load on the railroads by 3-7 percent. The creation of sufficient warehouse capacities and equipping them with essential loading and unloading mechanisms, and improvement in the work shift coefficient in warehousing can become a substantial factor in accelerating the turn-around of freight cars, ships and other means used to handle freight.

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*The conclusion on the need for preferentially increasing growth in fixed capital for warehousing relates not only to the active part of fixed capital. Just as important is the development of warehouse buildings and structures that in material and technical supply are only very arbitrarily assigned to the "passive" part of fixed capital since they fulfill a main function, namely providing for the storage of use values. The role of this part of fixed capital in supply and marketing is steadily increasing as the qualitative nature of output becomes more complex and storage requirements are raised.

Thus, the organization of reciprocal action among the sectors of the infrastructure and their "meshing" is becoming an urgent problem. Here, an important role is played by economic levers, the strengthening of cost accounting, mutual relations between the partners and joint planning of matching activity, and the development and application of new forms and methods of intersector coordination at the level of regions and the entire national economy.

Guaranteed Supply System Described

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROISVODSTVA (EKO) in Russian

No 1, Jan 81 pp 112-118

[Article by S.B. Karnaukhov, candidate of economic sciences, USSR Gossnab Scientific Research Institute for Material and Technical Supply, Moscow: "Guaranteed Supply for Production"]

[Text] The quality of consumer servicing by the supply organizations is being substantially raised with the development of the system of guaranteed comprehensive supply. Almost 10 years of experience in using this form of supply within the USSR Gossnab system has shown its great efficiency: supplying production with material reserves becomes more stable and the level of production stocks and supply costs are reduced.

Guaranteed comprehensive supply is carried out within the framework of funds made available to enterprises (limits) in accordance with the plans for material and technical supply. It is organized according to general purpose output not covered by direct, long-term economic links and delivered both by transit (producer-consumer) and from the warehouses of the Gossnab system.

The main elements of the system are:

raw materials, materials and articles are delivered to Gossnab warehouses using a routine approximating the maximum production demand on the basis of consumer orders and agreed delivery schedules;

territorial supply organizations guarantee the delivery of output to consumers; in the event of delays in unloading, in accordance with agreements signed with customers the obligation is met by releasing the order from the warehouses of the guaranteed supply system, by rerouting deliveries, and by temporary loans from other customers;

when entrusted to do so by customers, the territorial supply organizations accept for realization the funds (limits) assigned to them, and on their behalf conclude agreements with producers;

part of the insurance production stocks and, when required, other customer assets freed in connection with the transfer to guaranteed supply, are concentrated in territorial supply organizations so that they can maneuver resources and strengthen the material base for this progressive form of supply;

materials and articles, including supplies directly to shops and sections in industrial enterprises, are delivered to customers on a centralized system, and output is also prepared for production demand.

In 1972 the ratio of guaranteed comprehensive supply in the total volume of wholesale sales of output through the USSR Gossnab was 1 percent; in 1975 it was 3 percent, and in 1978 it was 7.6 percent; and its ratio in total sales, not counting deliveries of output through direct, long-term economic links, rose to 8.7 percent in 1978. The comprehensive supply system has spread extensively in the gossnabs of virtually all the union republics and main territorial administrations [GTU] of the USSR Gossnab, although the ratio by regions is uneven. The greatest development of the new supply form has taken place in the GTU of the Volgo-Vyatsk, Leningrad, Moscow City, Moscow, Central-Chernozem, West-Siberian, Kuzbass, Prioksk, and North Causcasus territorial-economic regions, and in the gossnabs of Belorussia, Kazakhstan and Latviya, where about 70 percent of the total volume of deliveries are effected through comprehensive supply.

The scales of guaranteed comprehensive supply by territorial supply-and-marketing organizations are growing constantly. Thus, in 1975, the new form of supply involved 3,920 enterprises; in 1976, the figure was 7,340, and in 1978 it was 8,480.

In 1977, according to the Scientific Research Institute of the Economics and Organization of Material and Technical Supply, within the USSR Gossnab, more than 12 percent of the main consumers had transferred to the progressive form of supply; by regions, this included: Sredne-Volsk, 22 percent, North Causcasus, 10 percent, Kuzbass, 16 percent, Moscow City, 17 percent and Leningrad 14 percent.

The sector structure of industrial enterprises and organizations that have switched to comprehensive supply is determined mainly by the economic profile of the region in which the GTU operates. The joint orders of the USSR Gossnab and interested ministries, issued in the period 1974-1977, have been promoting this form of supply In accordance with these orders, 1,605 production associations and enterprises have transferred to comprehensive supply for the main kinds of raw materials and materials.

Sector comparisons show that the most completely comprehensive supply is in machine building. Thus, its ratio in the Ministry of Machine Building has reached 48 percent of the total volume of output; for the Ministry of Construction, Road and Municipal Machine building the figure is 61.2 percent, and for the Ministry of Machine Building for the Light and Food Industry and Household Appliances, 51.6 percent. Of the main kinds of output, the largest share in the total volume of deliveries goes to ferrous metals (31.5 percent), nonferrous metals (11.9 percent) and chemical and rubber technology products (13.9 percent).

One condition for the efficient operation of the comprehensive supply system for providing customers with output earmarked for production and technical purposes is the ratio of enterprise-customers participating in the strengthening of the material and technical base of comprehensive supply. Through assets transferred to them and by using their own resources, the supply-and-marketing organizations of the USSR Gossnab are setting up at bases and warehouses centralized insured stocks and organizing the services essential for the introduction of comprehensive supply, and are organizing centralized supply and deliveries of complete sets of output for customers in accordance with agreed schedules.

The territorial organizations of the general state supply system have gained valuable experience in comprehensive supply. Its generalization is making it possible to isolate the most important elements of the progressive form of servicing.

The System of Delivering Output According to Agreed Calendar Schedules.

A number of territorial supply organizations already have experience in providing consumers with material reserves in accordance with calendar schedules and orders to release output. These kinds of schedules serve as a program for the centralized delivery of output to consumers. Output compatible with transportation and held at a single guaranteed supply warehouse is delivered to customers in one batch. In this way, planned supplies for customers are insured, the frequency of warehouse deliveries is doubled or tripled, and it becomes easier to control timely centralized delivery of output (10 to 14 days from the time the order is received).

Comprehensive Supply Using the "Kiev" and "Voronezh" Systems.

Warehouse deliveries to customers in this form of comprehensive supply are made on the basis of quarterly data on the needs for materials and monthly data on materials still remaining in customer warehouses, sent from the enterprise computer centers and passed to the computer center of the territorial supply organizations. Using these operational data the supply organization compute the delivery schedules for output every 15 days, monitor fulfillment, and take account of the movement of stocks at customer warehouses and their own warehouses. The organization of comprehensive supply using automated control systems enables enterprises to reduce their own production stocks to cover a 15-30 day period with a relatively small (10-15 percent) increase in commodity stocks at the Gossnab warehouses.

The possibility of extending this form depends on the amount of up-to-date computer equipment available at enterprises and supply organizations and agreement on hardware, software and data-handling facilities. Additionally, as the contingent of customers grows, a marked increase is required in commodity stocks at the guaranteed supply warehouses and in warehouse areas.

Comprehensive Supply According to Operational Orders.

Taking into account the experience gained in operating according to schedules and the features of material demands at enterprises, the GTU of Leningrad region is introducing a system of warehouse deliveries according to operational orders from customers. The main principles of this system are:

the customer has the right to order output at any period of the quarter if he has capital available to acquire it;

delivery of output from the Gossnab warehouse is guaranteed within 14 days from the time the order is received; if the output is not available the order is held on a list and when it becomes available customers are served in sequence.

Comprehensive supply for customers using operational orders facilitates the organization of deliveries under production conditions and reduces production stocks, and it can be used to supply enterprises with individual and small-series output.

Use of Consumption Funds in Accordance with Agreements.

The use by territorial supply organizations of customer consumption funds when so entrusted, regardless of the form of delivery, is the most developed form of comprehensive supply. Thus, since 1971 the administration of the Moscow City Pulp and Paper Production Supply-and-Marketing Organization has been utilizing on the basis of agreements the assets used for paper products by all the Moscow consumers. As a result there has been a significant improvement in the servicing conditions, and the activity of supply organizations in organizing transit deliveries has been stimulated. The ability to maneuver with material resources has been enhanced: if one of the supplier-producers does not meet his pledges, the load is switched to another supplier. Customers are guaranteed delivery when there are transit shortfalls through deliveries of paper products from the warehouses. Realistic possibilities have been opened up for building up the necessary commodity stocks.

Organizing the Servicing Center Through Shared Participation by Consumers. (The GTU for the Leningrad Region).

A servicing center has been set up on the territory of the Machine Building Association imeni Ya.M. Sverdlova with the shared participation of the Ministry of Machine Building. It supplies customers, mainly the enterprises of the Ministry of Machine Building, with section structural steel whose regional demand does not reach the transportation norms. The servicing center handles a warehouse that is used jointly for all eight enterprises of the Ministry of Machine Building and the associations of the Leningrad Metal Supply-and-Marketing Organization. Output is delivered to customers in small batches (up to 0.05 tons) using centralized transportation on demand. The association imeni Ya.M. Sverdlova services the customers but the Leningrad Metal Supply-and-Marketing Organization compensates it for all expenditures involved in the storage and release of output by means of warehouse mark-ups paid by the customers. Output is released only on the orders of the Leningrad Metal Supply-and-Marketing Organization.

The effect of the operations at the servicing center is seen in the elimination of losses of metal output from irrational substitution and in a reduction (down to one-third) in exchange operations with other consumers. Production stocks of section structural steel have been reduced more than 30 percent.

Similar forms of servicing have been introduced in the administration of the Leningrad Chemical Products Supply-and-Marketing Organization. The disadvantages of these centers are the long periods of current storage of commodity stocks (up to 120 to 150 days) and the increase in turnover costs.

Shared Participation of Ministries in the Financing of Service Center Construction.

In connection with the introduction of comprehensive supply using the "Voronezh" system, a servicing center (capable of handling a turn-around of 34,000 tons of metal structures) is under construction at the GTU of the Central-Chernozem region for the administration of the Central-Chernozem Metal Supply-and-Marketing Organization. The sector railroad is participating in the funding of this.

The Transfer by Consumers to the Territorial Supply Organizations of the Limit for General Purpose Motor Transport.

The centralized delivery of output is an important element in comprehensive supply, especially for out-of-town customers.

The practice employed by the Estonian SSR Gossnab is worthy of attention. It has organized redistributed limits for motor transport in favor of the supply-and-marketing organizations of the republic. In 1978, in connection with the transfer of 19 enterprises of the Estonian Ministry of the Meat and Dairy Industry to comprehensive supply, the ministry passed on to the ESSR Gossnab a limit of 24,600 vehicle hours for the utilization of motor transport facilities. As a result, the ratio of centralized deliveries of output from the bases and warehouses of the supply organizations increased and the utilization of motor transportation was improved.

Unfortunately, in practice, as a rule only individual elements of comprehensive supply are being used, and this has limited the effect of the progressive form of servicing production. Accordingly, special interest is aroused by the work done by the GTU of the South-Urals region, the Magnitogorsk Metallurgical Combine and the Scientific Research Institute for the Economics and Organization of Material and Technical Supply to transfer the combine to comprehensive supply in the entirety of all its directions and elements.

The scales of material requirements at the Magnitogorsk Metallurgical Combine, the considerable ratio of intersector turnover in deliveries, and the predominance of long-term economic links with suppliers are determining the low ratio of comprehensive supply in the structure of the combine's economic links. However, the extensive products list of materials required for auxiliary purposes along with the continuous nature of production give comprehensive supply a special significance.

In the draft agreement for the organization of material and technical supplies between the Magnitogorsk Metallurgical Combine and the GTU of the South-Urals region, an extensive range of questions is being regulated; these include supplies for the combine of output in the volume, range and time periods essential for meeting plan targets and customer orders, the rational utilization of material resources, and reductions in turnover costs. The agreement involves several parties, and the central apparatus of the South-Urals region GTU is involved in organizing comprehensive supply.

Another outstanding feature of the agreement between the Magnitogorsk Metallurgical Combine and the supply-and-marketing organizations of the South Urals is the delineation of the functions of the parties in accordance with the economic links formed and the regulation of supplies. Thus, provision has been made for the combine to use for production funds from intersector links on the basis of direct, long-term economic agreements. At the same time, general purpose output supplied in accordance with intersector economic links is accepted by the supply-and-marketing organizations for sale via the comprehensive supply system.

The measures agreed envisage the gradual development of a system for comprehensive supplies for the Magnitogorsk Metallurgial Combine: from warehouse deliveries of output in accordance with agreed schedules to sales in accordance with an agreed products list within the complex of both transit and warehouse facilities. During the 11th Five-Year Plan it is proposed to set up a centralized insurance reserve of raw materials, materials and articles needed by the combine and other enterprises in Magnitogorsk. For this purpose it would be expedient for the Magnitogorsk Metallurgical Combine to participate in funding for the construction of a universal warehousing complex, taking into account the prospects for developing a comprehensive supply system in the region and its subsequent transfer to the balance of the South Urals region GTU.

Preliminary computations show that the shared participation of the Magnitogorsk Metallurgical Combine in reinforcing the material base for comprehensive supply as a supplement to the centralized GTU assets will make it possible to insure steady supplies for the combine and other enterprises in the region and substantially raise the level of servicing for production. At the same time, the experience gained will be useful for other GTU's in the country.

Supply Associations Enhance Services

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian

No 1, Jan 81, pp 118-122

[Article by L.M. Krepkiy, candidate of economic sciences, USSR Gossnab Scientific Research Institute for the Economy and Organization of Material and Technical Supply, Moscow: "The Association for Supplying Output"]

[Text] An association for supplying output-- the OPP-- is an economic complex engaged in the material and technical supply for production and scientific-production associations, enterprises, construction sites and establishments located within the radius of its activity. It also provides for the sale of the appropriate range of output produced by the industrial enterprises and associations.

The association comprises similar (in terms of kinds of goods sold in any given territory, or in terms of other signs) administrations and departments that supply output from given products lists, bases, warehouses, wholesale stores, points for the hiring of instruments and apparatus, sections for providing production services and other dependent economic units not enjoying the rights of socialist state production enterprises. In individual cases enterprises and organizations, usually located in other oblasts, krays and republics, can be subordinate to the association or linked with it by the specific nature of their activities. They enjoy the rights provided for in the statute on the socialist state production enterprise. The association acts as the higher-standing organization relative to them.

Associations carry on their activities on the basis of cost accounting, have their own independent balance sheets and accounts and other bank assets, and are legal entities. At the associations set up within the USSR Gossnab system, the statute on the socialist state production enterprise is in force, but it would obviously be expedient to review legally their positions as production associations (or combines).

Funds for the development of the material and technical base, material incentive funds, bonus funds for the assimilation and introduction of new technology, and so forth are created within the associations. For individual enterprises, part of fixed and circulating capital and the material incentive funds, and funds for social and cultural measures and housing construction has been reinforced. Within the framework of the rights offered them, they can dispose of fixed and circulating capital and wages and material resources, and also funds, and enter into economic agreements on behalf of the association. The property of individual organizations and enterprises subordinate to the association is reflected in the balance sheets of these organizations and enterprises and constitutes an integral part of the summary balance of the association.

The head of the association is the head enterprise, as a rule the largest and best technically equipped, whose strengthened management apparatus is the apparatus for the entire association. The entire functional apparatus is usually centralized (planning, bookkeeping, main production and commodity subunits).

What Supply Associations Are.

Depending on the economic and geographical conditions prevailing in the republics and regions, the material and technical base, the scales of activity, the number of customers serviced, and a number of other factors, there are two main types of supply associations--specialized and general. The specialized associations are the result of organizational integration of commodity administrations handling and marketing similar and related output in terms of technical properties. They are usually located in the center of a union republic or economic region. They include associations that supply metal products, machinery and equipment, construction materials, products of the pulp and paper industry and certain other articles.

The general associations that supply output covering a broad products list have been extensively developed along with the specialized associations. Among these, two kinds are most typical:

general associations that supply output earmarked for production and technical purposes, located in the center of the economic region and handling and marketing output throughout the region. They are set up on the basis of specialized and general administrations that sell materials and articles covering an extensive product range;

general associations located in oblasts, krays and autonomous republics that are not centers of economic regions. They come into being on the basis of general administrations for the supply and marketing of output, metal bases and other supply bases and stores. Their creation makes it possible to concentrate the supply-and-marketing organizations located in an oblast, kray or autonomous republic and coming within the general state supply system and to distribute the material resources of the USSR Gossnab products list to individual consumers and bring the supply organization closer to the customers. As a result, the responsibility of the associations vis-a-vis the customers and local party and soviet organizations for supplying material resources to enterprises and construction sites is enhanced. Expenditures on the maintenance of the management apparatus are curtailed and administrative-economic questions are resolved on a more operational basis. More efficient use is made of the means of transportation and loading and unloading mechanisms. The directives of the specialized and general associations and administrations located in the center of a region are obligatory upon all noncentralized general associations servicing an economic region.

What Does the Organization of Supply Organizations Offer?

As at 1 January 1980, within the USSR Gossnab system 72 associations for supplying output had been set up on the experience gained and were in operation. A considerable proportion of these associations had been formed on the basis of a single large warehousing facility. These kinds of associations were established in Gorkiy, Kazan, Rostov, Tula, Ivanaov, Irkutsk, Moscow, Leningrad and other industrial centers. When all planned supply associations have been set up the number of independent, small supply-and-marketing organizations is as a rule reduced, compared with 1975, by a factor of 2.4; wholesale marketing per organizations increases here by a factor of 2.9, and by a factor of 3.4 for warehouse marketing. The numbers of workers per organization is increased 30 percent.

The number of administrative links in material and technical supply is considerably reduced (two or three instead of four or five). This insures operational and comprehensive supplies for customers and makes it possible to resolve most questions of supply on site locally. As a result of the strengthening of the organizations and enterprises, the associations for supplying output have at their disposal large warehouse capacities equipped with railroad, gantry, travelling and truck cranes and crane stackers, diesel locomotives and diesel shunters, electric-powered and motor-powered trucks, electric-powered stackers and other up-to-date equipment. Experience shows that consumers derive substantial advantages from the creation of the associations: the number of times they must address themselves to questions of output distribution and marketing is reduced, the circulation of documents and the number of agreements concluded are cut back and equipment inventories are improved. The associations provide for customers both production services (cutting and laying out of metal products, cable, paper, rope, band saws, rubber technical articles, packing of metal products, and liquid chemical products, making up batches of materials and articles) and organizational and commercial services. These include the renting of instruments and other technical means, marketing excess and unused materials from enterprises, obtaining and delivering freight to enterprises in accordance with agreements, selecting and delivering metal products from subquality waste, and information and brokering services, including consultation on the technical properties of new articles. The value of such services is obvious. Suffice it to say that the volumes of laying out and cutting for nonferrous metals will have increased by a factor of 2.3 and of paper products by a factor of 2.5 by the end of the current five-year plan compared with the previous five-year plan. The scale of services during the 11th Five-Year Plan is increasing even more: 12 times the amount of cutting and laying out of rolled metal and almost 4 times the amount of paper cut.

The facts show that the associations for supplying output constitute a promising form for servicing production. Their development is one way of implementing party and government decrees on improving planning and the economic mechanism.

Equipment Shortages in Supply

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian

No 1, Jan 81, pp 122-126

[Article by B.F. Mukhin, candidate of economic sciences, deputy chief of the USSR Gossnab Technical Administration, Moscow; and Yu.S. Gusev, candidate of technical sciences, chief engineer at the Orgsnab Institute, Gorkiy: "Machine Building Accounts Outstanding"]

[Text] Machine building plays a paramount role in raising the technical level of supply and marketing; at its enterprises new means of labor and modern machines and equipment for the mechanization and automation of warehouse loading and unloading operations are developed and produced.

Analysis shows that the comprehensive mechanization and automation of operations alone are capable of substantially improving labor productivity. At the Gorkiy general warehouse complex, one of the largest USSR Gossnab supply enterprises, powerful equipment has been introduced: overhead and elevator racking, automated crane stackers, mechanized batching lines for packaged products, automated systems, mobile racks and other means of mechanization and automation. Labor productivity at the enterprise has increased 70 percent, while mechanization of individual operations raises labor productivity only 5 to 7 percent.

However, machine building is by no means fully satisfying demand from material and technical supply and other sectors of the national economy for lifting and conveying and warehousing equipment. According to data from the All-Union Scientific Research, Planning and Design Institute of Hoisting and Conveying Machinery, Loading, Unloading and Warehouse Equipment and Containers, throughout the national economy as a whole demand for lifting and conveying equipment is only 70-72 percent satisfied, while demand for means of mechanization and automation is satisfied only 30-35 percent.

The situation is made more complicated by the fact that a number of targets for the production of the main kinds of machinery and equipment for the mechanization of loading and unloading and warehousing operations have not been met over the course of many years. Plans for the production of crane stackers by the Ministry of Heavy and Transport Machine Building, of electric-powered loaders by the Ministry of the Electrical Equipment Industry, and of fork-lift trucks by the Ministry of the Automotive Industry are not being fulfilled. Thus, in 1979 the Stakhanov Machine Building Plant in Voroshilovgradskaya Oblast was unable to cope with the production of ground-controlled travelling crane stackers having a lifting capacity of 0.5 and 1 ton, travelling crane stackers with telescopic jibs with lifting capacities of 1 ton, racking crane stackers with lifting capacities of 0.5 tons and other output. The plan for the production of spares for crane stackers was fulfilled only 19 percent by this plant.

The lagging behind by machine building is noticeably holding back technical progress in material and technical supply and warehousing. Pointing this out at the CPSU Central Committee November (1978) Plenum, comrade L.I. Brezhnev noted: "Foreseeing a slow-down in the growth of labor resources during the eighties, the party has set in good time the task of creating a machine building base for a considerable reduction in low-productivity manual labor. As long ago as 1973 an 8-year program was adopted for the accelerated development of the production of the corresponding equipment. How is this being fulfilled? If we take, for example, lifting and conveying equipment, not one of the new plants envisaged in the program has yet been commissioned." Evaluation of the technical level of equipment produced and planned for the mechanization and automation of lifting-and-conveying, loading and unloading and warehouse operations shows a definite lagging in a number of domestically-produced articles behind foreign-produced articles. Thus, in terms of economic indicators, low-capacity cranes (1 to 5 tons) meet world levels. However, medium-capacity cranes (10 to 15 tons) and heavy cranes (20 to 40 tons) are not as good as those produced abroad: the amount of metal used in them, for example, is 1.5 to 2 times greater.

Although in terms of their basic technical indicators domestically-produced gantry cranes are at the level of world standards, their productivity is lower because of the slower rate of movement of the crane and the freight trolleys. Domestic racking crane stackers with automatic freight pickup are not as good as foreign-made cranes either in terms of operational or economic indicators: their metal content per meter of length (or height) of the crane is 2 to 2.5 times greater and freight pickup rates, clamping extension and crane movement are 1.5 to 2 times lower.

It should be noted that the domestic industry does not produce crane stackers and other lifting and stacking equipment that is explosion-and-fireproof in operation. There is no special equipment for operations under the conditions of the Far North. Equipment modified for operation under automatic conditions is not produced. Soviet-made fork-lift trucks are not as good as foreign-made trucks in terms of their operational indicators and technical productivity because of slower rates for working movements and the limited heights to which they can lift freight; their dimensions are greater for the same lifting capacity.

The high economic effectiveness of mechanizing lifting and conveying, loading and unloading and warehousing operations, given the shortages of means of mechanization, has induced many ministries and departments to organize the production of this kind of equipment themselves. Now, more than 300 plants belonging to 35 ministries and departments are engaged in the production of lifting and conveying and warehousing equipment. Production of these machines in small-series batches at nonspecialized plants increases their cost by a factor of 1.5 to 2 and quality is lost and operational data deteriorate.

In the interests of satisfying the demand for lifting and conveying, loading and unloading and warehousing equipment and improving its technical level, reliability and service life, in our opinion it is expedient to centralize the production of this equipment. Along with the scientific organizations, on the basis of an assessment of the technical level of series-produced domestic lifting and conveying and warehousing equipment, targets have been set for the machine building ministries to organize the production of 85 kinds of new, highly productive equipment. Of these, 62 go to the Ministry of Heavy and Transport Machine Building, 15 to the Ministry of the Automotive Industry, and 8 to the Ministry of the Electrical Equipment Industry.

The following will be produced:

machines and equipment for mechanizing and automating loading and unloading and warehousing operations (crane stackers of various types and lifting capacities, including those with automatic control; dollies, sets of lifting and conveying equipment for warehouse packaged products and long-dimensional products, screw conveyers, pneumatic-powered conveying installations, electric-powered fork-lift trucks and regular fork-lift trucks for various purposes and so forth);

specialized technical means for processing and moving freight in packages and containers (gantry and travelling container cranes, loaders for various purposes and of various lifting capacities, towing vehicles and trailers for ports, self-loading tandem trailer trucks and so forth);

package-forming machines and automated lines for product packaging (automatic stack-storage lines, machines for stacking packages on trays, package stripping equipment and so forth).

Proposals put forward by the institutes are being used by the USSR Gossnab for drawing up jointly with the State Committee for Science and Technology and the USSR Gosplan, with the participation of ministries and departments, comprehensive programs for operations to extend progressive technology for warehousing, loading and unloading and conveying operations to industry, construction, transportation and material and technical supply. Implementation of the program will insure comprehensive mechanization and automation of freight handling at all stages of its movement from supplier to customer.

In the upcoming years a considerable expansion is planned within the USSR Gossnab system of services offered by supply-and-marketing organizations in the preparation of output for production requirements. In particular, a start will be made on the creation of a network of specialized shops to prepare output for production requirements of ferrous and nonferrous metals and chemicals and paper and cable products.

Expansion of these services requires supplying the material base for supply and marketing with machine tool, forging-and-molding, levelling and other equipment. Using the USSR Gossnab technical requirements, the machine building ministries must occupy themselves with the systematic development and assimilation of production of new equipment that is in accord with the leading achievements of science and technology in terms of its characteristics. It includes, for example, the development of sets of equipment for preliminary preparation of metals for production requirements using plasma cutting technology and so forth.

Other features in the development of the material and technical base for supply and marketing will also be conditioned by the considerable expansion in the coming years within the USSR Gossnab system of progressive forms of customer servicing such as making available to them for temporary use (rental) of instruments, apparatus and other technical means. The USSR Gossnab will act for the Ministry of Instrument Making, Automation Equipment, and Control Systems, the Ministry of the Electronics Industry, the Ministry of the Radio Industry and other ministries in the role of a major client and wholesale consumer of radio equipment, electronic measuring instruments, accounting and business machinery, laboratory equipment, optical instruments and other equipment, in order to create a rational range and quantitative structure for the rental inventory.

Aspects of Packaging Discussed

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian

No 1, Jan 81, pp 126-129

[Article by L.S. Bragina, candidate of economic sciences, USSR Gosplan Scientific Research Institute of Planning and Norms, Moscow: "Packaging as an Element of the Infrastructure"]

[Text] According to USSR Gossnab data, the packaging industry in the country is valued at R10 billion; this includes more than R1 billion of various crates, about R60 million boxes and drums, and more than R1 billion sacks. It represents the services to all sectors and spheres of the national economy, insuring economic links between production and consumer. As an important element of the infrastructure, packaging affects the efficiency of production and circulation.

Progressive Materials Are Needed.

One of the chief directions in technical progress in packaging, as in the entire national economy, is the adoption of chemical methods. It provides an opportunity to mechanize and automate product packaging, makes it possible to create packaging materials with new forms and new properties, increases shelf time and reduces product losses, and releases inadequate traditional materials for other purposes.

During the past decade, the proportion of packaging materials made from cardboard and plastics has increased in the world economy. An average of 51 percent of packaging materials and packaging is now made from paper and cardboard, 21 percent from metal, 10 percent from plastics, 9 percent from glass, and 9 percent from wood, fabric and other materials.

In our country special attention has been given to the more extensive use of cardboard and plastic packaging, whose production was organized during the 8th Five-Year Plan. As a result, whereas the total demand for packaging increased by a factor of 1.7 during 1978 compared with 1969, demand for plastics, for example, tripled. The ratio of wood and cardboard packaging is being systematically improved.

Even now, however, the structure of demand for various materials in packaging in the country is irrational. Cardboard and paper now make up 16 percent of it by cost; figures for other materials are: metals 12 percent, plastics 3 percent, wood 49 percent and others, 17 percent.

Despite the enormous timber reserves, wood materials are expensive and the saving of timber is a serious national economic task both from the viewpoint of preservation and the rational use of natural timber resources, and in the interests of saving social labor used on the production, transportation and processing of timber.

Replacing timber with cardboard and paper and the new kinds of materials (plastic woods and polymers) is exceptionally efficient. Suffice it to say that the production cost of a cardboard box is 2.2 times less than for a wood box of the same size; the use of cardboard boxes requires 4.2 times less material (calculated in terms of lumber) and as a result, 1 ton of cardboard saves 14 cubic meters of timber. Replacing plank boxes with cardboard and plastics makes it possible to make more complete use of the freight capacities of the means of transportation and of warehouse premises when storing empty packaging, since sectional cardboard boxes require only 10 percent of the space occupied by an empty wood package.

The use of plastics in packaging in many cases provides better storage for products, reduces losses of chemicals, foodstuffs and petroleum products, lowers labor input and production costs, and reduces capital expenditure on packaging preparation. It is becoming possible, for example, to combine the processes of production and packaging; it improves conditions for production and the coefficiency of use for the material is increased.

The properties of plastic packaging are typical and extremely valuable: it is lightweight, strong, elastic and has high temperature, corrosion and chemical resistance and is inert and hygienic; it does not absorb and does not transmit odors from the packaged product, it takes print readily and does not require painting. The bright, easy-on-the-eyes coloring of plastic packaging offers an opportunity of using a color code system for sorting and recognition of freight by design and nature. The low weight of plastic packaging improves the utilization of the means of transportation and reduces expenditures on transportation of the packaged product. However, despite these indisputable advantages the introduction of plastics is proceeding slowly.

There is still no domestically produced equipment for preparing packaging and the technical reequipping of the packaging industry; savings on materials, in particular commercial lumber, and the introduction of progressive technologic processes depend on this. Because of lack of equipment, most operations involved in the assembly of packaging are performed manually, which limits labor productivity.

Packaging Should Be in One Pair of Hands.

Packaging in the country, like the production of packaging, still remains dispersed and spread throughout many sectors. Thus, the paper and wood-processing industry produces wood packaging, the glass and porcelain-and-earthenware industry produces glass packaging, the chemical industry produces plastic packaging and light industry makes metal foils.

Three forms of production organization have taken shape: in the auxiliary shops of consumer enterprises, in specialized shops at the enterprises producing materials for packaging, and at specialized enterprises. The USSR Gossnab and, in part, the USSR Gosplan, are engaged in the planning of volumes of production and demand for freight packaging. Within the country there exist associations that produce freight packaging. An interdepartmental council on packaging was formed during the 9th

Five-Year Plan as a coordination center for its production and use. However, the production of consumer packaging is not planned and not taken into account.

The lack of a unified plan and technical direction for the production of packaging in the country is, in our view, the main cause of this fragmentation in production. It is time to unify the packaging industry, creating either a specialized sector of the infrastructure or a subsector within the framework of material and technical supply. It is very important to try to achieve a rational structure for production of and demand for packaging made from various materials. The technical and economic levels of the sector can be raised through developing specialized production for economic kinds of packaging, designing packaging production and packaging equipment, improving quality, standardizing and unifying packaging, improving methods for current and long-term planning, and improving production management. A price policy encouraging the replacement of traditional materials with plastics and combination materials based on plastics would promote the intensive introduction of packaging made from progressive materials, along with expansion of the scales of production.

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REGIONAL DEVELOPMENT

CONFERENCE REPORT ON KUZBASS, TRANSBAYKAL, ALTAY AREAS

Kuzbass Development

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 1, Jan 81 pp 16-22

/Article by L. A. Gorshkov, first secretary of the Kemerovskaya Oblast Party Committee: "Present Kuzbass and Its Problems"/

/Text/ The June (1980) Plenum of the CPSU Central Committee, which adopted a decision on the convocation of the 26th party congress, decrees of the CPSU Central Committee and addresses by Comrade L. I. Brezhnev direct the party and the entire Soviet nation toward increasing production efficiency and work quality. Siberia plays an increasing role in the country's progressive movement along this path, which is indicated by the all-Union conference on the development of Siberia's productive forces held in Novosibirsk (see a detailed report on its work in EKO, No 12, 1980). Leaders of party organizations of the region's krays, oblasts and autonomous republics spoke at the conference. They discussed the successes with which Siberians were coming to the party congress and shared their thoughts about the ways of further increasing the economic and scientific potential. We publish these speeches (in an abbreviated version) in this and subsequent issues of the journal.

Realizing the decisions of the 25th CPSU Congress and Comrade L. I. Brezhnev's recommendations, the CPSU Central Committee and the USSR Council of Ministers adopted a number of important decrees aimed at increasing the efficiency of public production and developing science in Siberia. Getting ready for the 26th party congress, the workers of our oblast, as well as of all Siberia, try to more rapidly and efficiently activate the kray's natural resources and to augment their contribution to the establishment of the material and technical base of communism.

Occupying only 2 percent of Siberia's territory, Kuzbass concentrates a substantial part of its population, whose bulk is the working class. Almost 34 percent of West Siberia's industrial and productive capital is located and more than 500 industrial enterprises with an annual volume of output worth about 10 billion rubles operate in Kuzbass.

Our oblast supplies coking and energy coal, building and structural metal, aluminum, mineral fertilizers, caprolactam, chemical fibers, chemical equipment, electrical engineering articles, cement and other products to the national economy. Today Kuzbass gives the country one-fourth of the hard coal and one-third of the coking coal. In 1980 the volume of hard coal output reached 153 million tons. In the same last year of the 10th Five-Year Plan the oblast produced about 1 billion kWh of electric power, almost 11 million tons of cast iron, 12.6 million tons of steel and more than 9 million tons of rolled metal.

Coal is our main wealth. A total of 725 billion tons of coal are concentrated in the earth's interior in Kuzbass, but so far a little more than 3 billion tons have been extracted. The basin's coal is advantageously distinguished by a diversity of grades, a low content of ash and sulfur and a high calorific value. And what is especially important, the cost of extraction is two-thirds as much and the productivity of a miner's labor is twice as high as, for example, in Donbass. Every third ton of metal in the country is now smelted on Kuznetsk coal. Calculations have shown that in the future Kuzbass will be able to produce up to 550 million tons of coal annually, including up to 300 million tons of energy coal.

Improving the structure of extraction by opencut and hydraulic methods is one of the basic ways of solving this problem. The development of such promising Kuzbass rayons as Karakanskiy and Yerunakovskiy and the reconstruction of existing open pits--all this will make it possible to increase opencut mining to 150 or 200 million tons annually over a long-range period. The proportion of the opencut method will comprise 45 percent. This alone will increase labor productivity in the basin 1.7- to 1.8-fold and will lower production cost by 25 to 30 percent. A significant rise in the technical level of coal mining in general and underground mining in particular as a result of an increase in the proportion of the hydraulic method and development of new mining flow sheets is no less important for us.

In the last few years the Institute of Mining of the Siberian Department of the Academy of Sciences has performed a number of studies aimed at increasing the efficiency of the oblast's coal industry. At the same time, in our opinion, problems connected with the development and introduction of new equipment and technology for the exploitation of coal deposits in Kuzbass deserve greater attention. After all, our deposits are noted for a high gas abundance, danger of spontaneous combustion and sudden outbursts and mine shocks. This especially applies to Prokop'yevsko-Kiselevskiy Rayon, where valuable coking coal is extracted.

Judge for yourselves. All stoping and entry driving machines, mechanized supports, excavators and bulldozers are brought to us from the country's other regions. We will not discuss the fact that there is a shortage of this equipment. It is much worse that in its technical specifications it is not suitable for the mining-geological and climatic conditions of Kuzbass. Therefore, to further increase the volumes of coal output and its efficiency, it is necessary to establish a mining machine building base in the West-Siberian Region, which will provide equipment for the coal and ore sectors of industry in Siberia and North Kazakhstan.

Problems connected with the use of coal as a source of organic raw materials require a more thorough solution. The accumulated experience in the operation of large coal-chemical and chemical enterprises, as well as the possibilities for underground gasification, enables us to think that the time has come to raise the problem of organizing in Kuzbass a center for the development of scientific principles and, subsequently, construction of pilot enterprises of a new large-scale sector for the production of liquid and gaseous fuel and chemical industries on the basis of the coal of the Kuznetsk Basin.

As already stated, the share of Kuzbass in the production of metal and chemical products is such that it obligates us to determine the ways of further developing these sectors in a more thoughtful way and on a scientific basis.

In the very near future the Kuznetsk Metallurgical Combine and the West Siberian Plant will be able to increase steel output to 15 million tons. However, an increase in metal production will be determined in large measure by the preparedness of the raw material base. In the last few years the rate of growth of the extraction of local ores has slowed down. The development of geological survey work, the most rapid construction of new mines and a concentrating base and an increase in ore output at existing mines--in our opinion, this is the correct way of establishing a reliable iron ore base in Siberia. This will make it possible to discontinue the delivery of ore from the country's other regions.

Kuzbass is developing as the raw material base of heavy industrial sectors, which causes a rapid increase in mass freight flows. Every year we send a total of 220 million tons of freight from the oblast by railroad alone. Every day about 50,000 railroad cars are engaged in transportation.

The railroad does not cope with freight transportation, which often hampers the operation of enterprises. This is especially characteristic of the coal industry. There is an urgent need to solve this problem fundamentally. We consider the proposal for the construction of the Kuzbass-Volga area railroad and for the expansion of the network of motor vehicles of all-Union and local significance correct and timely. In our opinion, special attention must be given to fundamentally new types of transportation, primarily pipeline transportation. For this purpose we should study the problem of organizing the production of large-diameter pipes in West Siberia.

Taking into consideration the high concentration of industry, existence of large-tonnage raw material sectors and great population density (31 people per square km), the development of Kuzbass should be combined with the solution of complex problems of environmental protection. This problem is of special importance for us. The total area of disturbed land in the oblast is 52,000 hectares. About 7,000 hectares must be recultivated right now. The water and air basin of Kuzbass is polluted greatly.

In the last few years the oblast party organization has adopted a number of environmental protection measures. The sanitary condition of the oblast's cities has improved somewhat, although, at the same time, the production volume and, accordingly, the amount of industrial and household waste have increased. Problems connected with the mining and biological recultivation of land, control of the Tom' water basin, utilization of mountain rocks, ash and slag, development of waste-free technologies and a number of others have not been studied quite fully.

We see that in the last few years the Siberian Department of the USSR Academy of Sciences has done a great deal for the development of academic subdivisions in the country's eastern regions. The scientists of the Siberian Department have also strengthened the cooperation with the specialists of leading sectors in Kuzbass. However, the interests of the national economy of Kemerovskaya Oblast require the transformation of these fruitful, but casual, relations into a purposeful resolution of major theoretical and applied problems of development of our industrial region. In Kuzbass there are now only two divisions and two laboratories of the institutes of the Siberian Department of the Academy of Sciences. This is the first step in the development of academic science.

We believe that the USSR State Committee for Science and Technology, the Presidium of the USSR Academy of Sciences and the Siberian Department must increase their attention to the development of academic subdivisions in Kuzbass. It is advisable to more rapidly establish the Institute of Physicochemical Problems and Synthetic Fuel and the economic research division at the base of the economic forecasting laboratory and to help in the organization of a number of problem laboratories at higher educational institutions in Kuzbass. The time has come to raise the category of scientific subdivisions of higher educational institutions in our region. It is also advisable to give thought to the establishment of the Institute of Mining with an experimental base in Kuzbass during the 11th Five-Year Plan.

In our opinion, The USSR State Planning Committee, the State Committee for Science and Technology, Siberian departments of the Academy of Sciences, the All-Union Academy of Agricultural Sciences imeni V. I. Lenin and the Academy of Medical Sciences should organize an overall expedition in the Kuzbass Economic Region and base the long-term program for the development of Kemerovskaya Oblast on the results of its work.

Problems in Tomskaya Oblast

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 1, Jan 81 pp 22-27

/Article by Ye. K. Ligachev, first secretary of the Tomskaya Oblast Party Committee: "Tactics of Development of Natural Resources"/

/Text/ I do not wish to present data on the oblast's natural resources. First, they are well known and, second, in Siberia there are no poor oblasts. The natural resources of every kray and oblast are worth millions and billions. In brief, all are "millionaires" and "billionaires..." At the conference in Novosibirsk a great deal was said about what to develop and at what rates and many national economic problems were raised. Other problems, for example, the development of the Ob' floodplain as a single major natural complex, can also be mentioned.

I would like to make some observations of the methods and ways of solving these problems, that is, the tactics of development of natural resources. This is especially appropriate now, when everywhere there is a kind of review of the possibilities for the fulfillment of the new tasks that will be set by the 26th party congress. The Central Committee of our party urges us to do this. "The task is," said L. I. Brezhnev, "to most efficiently use the patriotic enthusiasm of workers, kolkhoz members and the intelligentsia, which we have now, on the eve of the 26th party congress. It is necessary to actively support all the undertakings aimed at a better utilization of internal resources."

Capital investments and volumes of work increase in Tomskaya Oblast every year. Judge for yourselves. The capital investments in the national economy in the last 15 years increased 3.3-fold as compared with all the previous years of Soviet rule. Moreover, natural resources have to be developed in uninhabited regions, which are not easily accessible. Of course, the following question arises: How to perform the unprecedented volumes of work and to increase the return on investments under such conditions? Ordinary methods and techniques will not do here. Fundamentally new approaches are needed.

In his speech at the November (1979) Plenum of the CPSU Central Committee Comrade L. I. Brezhnev noted that advancement "requires a rise in the level of management in the broadest sense of these words." I will discuss two problems: the watch method of development of natural resources and automation of labor processes.

The very idea of the watch form of production organization is not new. However, it has not received proper recognition in a number of sectors. The USSR State Planning Committee, the Siberian Department of the USSR Academy of Sciences and, in particular, the Institute of Economics and Organization of Industrial Production, the Tomskaya Oblast Party Committee and the oblast executive committee with the participation of many ministries and departments held an all-Union conference on improvement in the watch form of development of natural resources in the country's eastern and northern regions in Tomsk in March 1980. The conference again confirmed the viability and economic and social expediency of the watch method.

The long-term experience in the search for and development of timber resources in the oblast's north has demonstrated that such a method makes it possible to gain time, to draw natural resources into the national economic turnover more rapidly and with the lowest expenditures and to ensure good living conditions in the base city. The development of the Vasyugan deposits alone, which we have begun by means of watches, will save more than 200 million rubles and will enable us to reach the maximum petroleum output 4 to 5 years earlier.

Every year 1 out of 4 or 5 cubic meters of timber in the oblast is procured by watches. The savings total 70 to 80 million rubles. More than 6,000 people work simultaneously by the watch method in the oblast at present. The system of "base city-watch settlement" in contrast to small villages reduces personnel turnover. Our base cities Tomsk, Strezhevoy and Kolpashevo have a relatively high degree of civic improvements and a modern level of services.

Despite the demonstrated viability of this method there are still many problems that require a solution. They include the planning of watch settlements and output of components for buildings for production and social purposes. The watch method is predestined to develop and grow. The time has come to establish in the country an industry for the production of light metal components, from which a single complex of residential and cultural-general premises, not individually standing houses, can be assembled quickly and with minimal labor expenditures. Life in small vans no longer suits workers. This type of housing is obsolete and uncomfortable, especially under the harsh Siberian conditions.

There are also other important problems; first of all, the management of watches and the training of workers and specialists. Recently, decisions on improvement in the watch method were adopted and assignments were given to the USSR State Planning Committee and Union ministries. We are confident that the situation will improve. It is important to include the watch method in the national economic plan and in the long-range schemes for the development of natural resources.

Now, about the automation of labor processes. Taking into account the acute shortage of labor resources and the need to increase the efficiency of their utilization, Tomsk's scientists and production workers persistently work on the automation of industrial processes, scientific experiments and processes of management. The first stage of the automated system for the control of the national economy in the oblast and systems for the automation of scientific experiments and industrial processes in machine building production are put into operation.

It is well known that the use of machine tools with digital program control is becoming a daily matter. More will be involved. A large shop for the group control of machine tools and processing centers with digital program control by means of computers was established and operates in Tomsk. The development of programs was automated. This made it possible to carry out more than 35 percent of the machining volume on 10 percent of the area, to eliminate rejects and to disengage 90 fifth- and sixth-category machine tool operators.

A system for the automation of scientific experiments is being developed and introduced at the academic Institute of Atmospheric Optics. A computer center for collective use already operates in Tomsk. This made it possible to greatly increase the efficiency of utilization of computers.

The automation of industrial processes and scientific experiments on the basis of the KAMAK system and the computer center for collective use--all this is the result of the joint efforts of academic institutes, higher educational institutions, plants and statistical bodies. Academician A. P. Aleksandrov, president of the USSR Academy of Sciences, academician A. A. Sidorenko, vice-president, and academician I. F. Obraztsov, RSFSR minister of higher and secondary specialized education, became convinced of this during their visit to Tomsk. A council under the oblast party committee directs the work on automation. A number of instruments were developed and manufactured by Tomsk institutes and plants and instruments already produced by industry were used.

Unfortunately, there are many difficulties with the provision of automation equipment for production and scientific processes. The point is that its production is planned in units, not in sets, of articles. The time has come to supply automation equipment on the basis of the KAMAK standard in sets. Then things will be much faster. It is necessary to improve the training of the appropriate personnel in the country's higher educational institutions.

Finally, the realization of the Sibir' program will be possible only when science itself is further developed in Siberia. These problems are in the center of activity of the oblast party organization.

A few words about the further development of the network of scientific institutions. Affiliates of the all-Union oncological and cardiological centers of the USSR Academy of Medical Sciences were opened in Tomsk not long ago. N. N. Blokhin and Ye. I. Chazov, academicians of the USSR Academy of Medical Sciences, the country's prominent scientists, invested a great deal of effort in the establishment of these centers. These affiliates will work for the entire Siberian region. In our opinion, institutes of solid-state physics and of applied geophysics should be organized on the basis of the already established academic divisions in Tomsk during the 11th Five-Year Plan. We must have strong scientific subdivisions for these major scientific trends in the Siberian Department.

Industrial Complex for Transbaykal Area

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 1, Jan 81 pp 27-32

/Article by M. I. Matafonov, first secretary of the Chitinskaya Oblast Party Committee: "Rational Contours of Complexes"/

/Text/ L. I. Brezhnev stated the following at the festive meeting in Alma-Ata devoted to the 60th anniversary of the Kazakh SSR and the Communist Party of Kazakhstan: "The modernization of basic industrial sectors--power engineering, metallurgy, machine building, chemistry and transport--should become the core of further economic and social development. Here we must look ahead, as a minimum, for the period until 1990." These directives are of extraordinary importance for the prospects for the development of our oblast.

Local deposits of gold, fluorites and molybdenum have been long developed in the Transbaykal area. The extraction of lead, zinc, tin and tungsten occupies a big proportion. Owing to the activity of geologists, large copper deposits were discovered in our region. The coal reserves safely ensure the development of power engineering in the oblast.

The machine building complex is formed as a sector of Union specialization mainly for the output of mine hoisting, transport and woodworking equipment, river vessels and motor vehicles and compression refrigerating machines. The development of the timber and woodworking industry is based on timber reserves totaling 2 billion cubic meters with an estimated annual cut of almost 15 million cubic meters, of which only one-third is felled annually. Enterprises producing fabrics and sheepskin-fur, leather and sewn articles represent the oblast's light industry. The complex of food enterprises is based on the processing of local raw materials.

Despite the complexities and difficulties caused primarily by the sharply continental climate, on the whole, the oblast has favorable possibilities for the development of agriculture. Kolkhozes and sovkhozes produce agricultural products worth 520 to 540 million rubles annually. Agriculture grows slightly faster than the agrarian sector of other regions in Siberia and the Far East. Animal husbandry, primarily sheep breeding, which is based on vast natural pastures, is the leading sector. The Transbaykal breed of fine-fleece sheep was developed through the efforts of scientists and practical workers. The oblast produces 16,000 to 17,000 tons of wool annually and occupies the third place in the RSFSR.

It seems to us, however, that the development of the agrarian complex of the Transbaykal area is poorly thought out in the Sibir' scientific research program. This zone with quite complex climatic conditions has neither early ripening highly productive grain varieties, nor fodder crops. Partially for these reasons in Chitinskaya Oblast the indicators of the population's standard of living are lower than in other Siberian regions.

From L. I. Brezhnev's speech at the October (1980) Plenum of the CPSU Central Committee all of us learned with enthusiasm that the Politburo of the CPSU Central Committee adopted a decision on the preparation of the food program. This decision impels us--scientists, production workers and party workers--to study even more profoundly the individual aspects of the Sibir' program so that it may have an efficient effect on all the areas of life of our vast region.

During the 9th and 10th five-year plans the volumes of capital construction increased and from all sources of financing fixed capital worth almost 4 billion rubles was put into operation. The number of construction and installation organizations increased and the base of the construction industry was developed further.

At the same time, the level and rates of capital construction remain low and do not ensure proper economic development. This is due primarily to the weakness of the construction complex. In the presence of a firm raw material base the construction materials industry and the construction industry lag. Fully prefabricated construction comprises only 29 percent and the proportion of large-panel house construction, 25 percent of the total volume. During the 11th Five-Year Plan we ought to increase the capacity of the construction complex more than 1.5-fold, to establish specialized organizations for work under northern conditions and to equip them with special machinery for northern conditions. The subdivisions of GlavBAMstroy accumulated rich experience in construction on perennially frozen ground. However, in 1 or 2 years the volume of some work (primarily excavation) will begin to be reduced. It would be unsound to lose these collectives. They should be promptly transferred to the construction of industrial projects in the north of Chitinskaya Oblast, Buryatia and Yakutia.

What prevents us from rapidly placing the richest natural resources at the service of the country? In connection with this I would like to discuss one of the problems. As yet sectors of national economic specialization in the oblast have been formed very inefficiently. In connection with this disproportions are observed. Many potentials are not realized. The production complex needs all possible support on the part of economically more developed regions, especially on the part of science. I shall try to illustrate this with a number of examples.

Udokan should have a special place in the development of nonferrous metallurgy. The Sibir' program correctly draws attention to the priority development of this deposit. The copper reserves make it possible to establish a mining and metallurgical complex there. A considerable part of the ores can be extracted by the opencut method.

The mining and metallurgical complex will be built and operated under difficult conditions. Highly productive equipment, the most modern technology and high automation of production will be needed. I mention this, because such machines are not yet produced in the country. The appropriate organizations should carefully study this problem and determine specific measures to resolve it.

The techniques of concentration of Udokan ores should be improved more actively. With the vast volumes of ore processing established in design solutions to increase metal extraction only by 1 percent is equivalent to putting into operation a modern medium-size mine. For this purpose an experimental mining and concentrating enterprise must be built in the region of Udokan in the next few years. Without this there can be no question of an effective utilization of the deposit. Many overburden rocks and, in the process of operation, slime will be accumulated there in time. These are very valuable raw materials. It would be inexcusable not to utilize them in the interests of development of the construction industry. Thereby we will also preserve nature. I believe that scientific research organizations will be interested in this important problem.

The special natural conditions under which the Udokan deposit is require increased prospecting and scientific research. As yet the materials available to planning, economic and scientific bodies are obviously insufficient. On their basis it is hardly possible to determine the correct construction policy.

The Chara ferruginous quartzite deposit,an integral part of the Charo-Tokkinskiy Iron Ore Region, is located in the north of the oblast in direct proximity to the Baykal-Amur Trunk Line. Its forecast reserves are estimated at billions of tons. When ores are concentrated, a high-grade concentrate suitable for direct iron reduction is obtained. Up to 70 or 80 percent of all the reserves can be extracted by the opencut method. The deposit is of interest in connection with the envisaged development of ferrous metallurgy in the east of the country.

The Apsetskoye Coal Deposit located in the same region is very promising. Its forecast reserves are 3 billion tons. According to preliminary data, it has coking coal. Large deposits of building materials and of cement and aluminum raw materials in the form of sinnerite and nepheline syenite were also discovered and explored in the zone of the Baykal-Amur Trunk Line.

In our opinion, everything that has been enumerated creates a real basis for the formation of a large territorial production complex, not simply an industrial center, in the north of the oblast.

The Udokan Complex has a vast volume of freight flow. It counts mainly on the Baykal-Amur Trunk Line. This is correct. At the same time, the development of the oblast's north will be impossible without a reliable network of motor roads.

Many have already been provided, but I would like to once again raise the problem of the construction of the Mogocha-Chara motor road. It is very necessary right now in order to expand the preparatory work on the development of the entire vast area between the Trans-Siberian Trunk Line and the Baykal-Amur Trunk Line, not only the Udokan deposit. Obviously, in time this region will need another railroad.

The formation of the Udokan Territorial Production Complex will create favorable conditions for the organization of large-scale chemical and metallurgical production in the Transbaykal area. In our opinion, Nerchinsk could become one of the probable centers for placing it. This site meets all the requirements of large-scale industrial facilities.

Placing a copper chemical combine in Nerchinsk would make it possible to process, in addition to Udokan concentrates, the copper concentrates of other enterprises. It is economically advantageous to unify this combine into a cooperative with others for the utilization of sulfuric acid.

Thus, a new large industrial complex is being formed in the southern part of the East Transbaykal area. It will ensure high national economic efficiency and an overall utilization of mineral and raw material resources.

It should be stated that the situation with the overall utilization of raw materials is by no means satisfactory. Another large mining enterprise is being put into operation in Chitinskaya Oblast. In addition to the nonferrous metal contained in the deposit ores, feldspar, mica and quartz are of industrial interest. Calculations show that the effect from the realization of so-called secondary types of raw materials will be almost three times as high as the effect from the extraction of basic metals. At the same time, the load on the environment will be lowered.

The energy discrepancy is the next impediment. In the oblast there are more than 9 billion tons of coal reserves. We believe that it is necessary to accelerate the solution of the problem of expanding the Kharanorskiy Open Pit and to increase its capacity to 12-15 million tons, as well as to immediately embark on the construction of the Tugnuyskiy Open Pit in the west of the oblast.

In our opinion, the machine building complex should develop primarily as a result of the reconstruction and expansion of existing plants and a better utilization of capacities.

In light industry I would like to draw attention to cross hauls of wool and raw materials. It is possible to eliminate them by building initial wool processing factories and, in combination with a chrome leather plant, a footwear factory. It is time to also reconstruct sheepskin-fur production.

The outlined program for the development of Siberia's productive forces gives us great satisfaction. We are very grateful for the regional programs singled out in the Sibir' program, within the framework of which, to be sure, scientific research will be coordinated, including with the participation of organizations located in our oblast. We expect that within the framework of this program rational contours of territorial production complexes will appear more and more clearly from year to year.

Agriculture in Altay

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) in Russian No 1, Jan 81 pp 33-39

[Article by V. T. Mishchenko, secretary of the Altayskiy Kray Party Committee: "Altay Is the Eastern Granary of the Country"]

[Text] Altay's fame is in agriculture. It is among the first five krays and oblasts in Russia in the volume of agricultural production. The development of virgin land increased the average annual grain production to 6.3 million tons during the Ninth Five-Year Plan and to 5.4 million tons during the 4 years of the 10th Five-Year Plan. The kray is also a large animal husbandry region. We have 2 million head of large-horned cattle, more than 3 million sheep and Siberian stag breeding and fur farming sovkhozes.

On the basis of the formed structure of the national economy we must assume that the development of Altay as an agroindustrial complex is the only correct way. The climatic conditions and, primarily, the large number of warm days are conducive to this. Therefore, agricultural production in Altay, despite shortcomings, is highly efficient. Gross agricultural output per 100 rubles of capital investments is 1.5 times as high as the average in Russia and it costs the state less than in other regions. The level of labor productivity is also much higher than the average Union level. There are twice as many sown areas and 1.4 times as many head of large-horned cattle per peasant. The marketability of agricultural production is also higher. The proportion of purchases is 1.2 to 1.3 times as high as the average republic level.

An increase in yield is the main task in grain farming. This can be attained through the application of mineral fertilizers, irrigation and advanced agricultural techniques. It has been established that the increase in harvest in Altay per kg of applied fertilizers averages 14 kg, which is twice as high as in the European part of the country. At the same time, the amount of fertilizers applied per hectare of sown area is one-fourth the average amount in the republic and one-half the average amount in West Siberia.

In order to feel the effect from the application of fertilizers, it is necessary to increase their delivery approximately threefold by 1985 and sixfold by 1990. It seems to us that it will be easier to cope with this task if we place in the kray a plant for the production of fertilizers on the basis of the natural gas of Tomskaya Oblast. Such a plant could supply fertilizers to all of Siberia, not only to Altay.

The negative effect of climatic factors on the production of agricultural products can be mitigated to a considerable extent through reclamation. On irrigated land on advanced farms harvests are three to four times as high as the average in the kray and production costs decrease to two-thirds or one-half. However, only 66,000 hectares are now regularly irrigated in the kray, yet 2 million hectares can be irrigated. In 1980-1990 we want to regularly irrigate up to 500,000 hectares. For this it is necessary to build the Kulunda and Burlinskiy canals, as well as a canal for the transfer of water from the Charysh River to the Aley River.

Siberia strictly limits the periods of agricultural work. Calculations and observations show that stretching harvesting from 9-15 days to 1 month leads to losses of up to 20 percent of the harvest. It would seem that the provision of Siberians with equipment should be higher than in other regions. In fact, however, the situation is different. For example, grain harvesting combines per 1,000 hectares of grain crops in Altay comprise only 80 percent of the level of the Central Economic Region. The situation with tractors is even worse. Their number is one-third lower than the average in Russia.

The provision of the kray's kolkhozes and sovkhozes with fixed productive capital is low. The situation also becomes complicated, because it is difficult to increase fixed capital owing to the weak construction base. As a result, kolkhozes and sovkhozes lag in the level of mechanization and electrification of labor. The latter is 16 percent lower than the average in the republic and 28 percent lower than the average in West Siberia. A total of 7 percent of the kolkhozes and sovkhozes are not connected to the state power system and in Gorno-Altayskaya Autonomous Oblast, more than 62 percent. The electrification of the kray's agriculture must be basically completed in the next few years.

However, the further development of Altay's national economic development will require a more reliable power supply. There is an urgent need to reconstruct electric networks and to develop intersystem communication, that is, to build a high-voltage 500-kV Novokuznetsk-Barnaul line, a 220-kV Pavlodar-Kulunda line and so forth. The kray's largest rivers--Katun', Biya and Charysh--are of considerable interest. The plan for the utilization of the hydraulic resources of the Katun' developed by the Gidroproyekt Institute envisages the construction of a cascade of six hydraulic power systems with a total power of 3.7 million kW and output of electric power of about 18.5 billion kWh. The Yelandinskaya Hydroelectric Power Station, which, according to preliminary calculations, will ensure an annual output of more than 6 billion kWh, is a top-priority project.

The establishment of a large-scale industry for the processing of agricultural produce is of great importance. For example, the capacities of meat combines make it possible to process only 70 percent of the livestock planned for delivery. The shortage of refrigerating capacities comprises 42 percent. At the same time, the construction of the Blagoveshchensk and Aleysk meat combines is postponed from year to year and the reconstruction of the Barnaul, Biysk, Rubtsovsk and Gorno-Altay meat combines is delayed.

Altay accounts for 11 percent of the high-fat cheeses and 4 percent of the butter produced in the Russian Federation. However, more than one-half of the 105 butter and cheese plants have a 70-percent wear and tear, one-third are not connected to state electric transmission lines and do not have refrigerating installations and 86 percent dispose waste water without purification. The low technical level of these enterprises leads to an inefficient utilization of milk and dairy products. Every year 460,000 tons of skim milk, buttermilk and whey and 120,000 tons of whole milk are used for fodder for animals.

The present stage in the country's development is characterized by a qualitatively new approach to the distribution of industry. This is dictated by the need for a more rational utilization of labor, raw material and fuel-power resources.

The kray party committee and the kray executive committee believe that it is necessary to follow two basic principles, that is, to develop primarily the sectors that form the country's agroindustrial complex and, second, those that have become traditional for the kray--machine building, chemistry and petrochemistry and light and food sectors. Taking into consideration the need for the further growth of agricultural production and, in particular, animal husbandry, it is advisable to build a plant for the output of machines for the mechanization and automation of fodder procurement and fodder preparation in Altayskiy Kray.

In our opinion, Altay's proximity to Kemerovskaya and other oblasts producing metal and energy carriers, as well as the experience in machine building itself, make it possible to place a large complex for the production of equipment for the petroleum industry in Barnaul, as well as a number of new machine building enterprises in Rubtsovsk, Kamen', Slavgorod, Aleysk, Zarinsk, Tal'menka and Blagoveshchenka and a complex of industrial rubber plants in Biysk.

With Siberia's development the number of motor vehicles increases every year. Most likely, it would be economically most advantageous to acquire in the kray or neighboring oblasts a plant for the assembly of motor vehicles capable of meeting Siberia's needs.

Malfunctions in motor transport due to poor roads evoke our special concern. Only one-third of them (out of 30,000 km) has a hard surface. The bulk of the bridges are wooden and most of them need to be replaced. On the superhighways there is no exit to neighboring Kemerovskaya Oblast and Kazakhstan. Many rayons are not connected among themselves and with the kray center. All this hampers interfarm relationships and is not conducive to retaining personnel, especially in rural areas. A solution of these problems is possible only if a strong road construction base is established in the kray. It seems necessary to build a special reinforced concrete article combine for outfitting small and medium-size bridges and bridgeworks. This combine would meet the needs of Siberia's other regions, not only of Altay. However, its construction has been postponed for the last 2 years.

Altayskiy Kray has available large mineral resources, primarily iron ores, mercury, tungsten, various mineral salts and nonore materials. Beloretsk and Inskoye magnetite iron ore deposits have the most favorable conditions for top-priority development. A technical and economic substantiation for the construction of a mining and concentrating combine of an annual productivity of 9 million tons of crude ore has been prepared. Taking into consideration the fact that the West Siberian Metallurgical Combine now receives ore from Korshunovskiy and Sokolovo-Sarbayskiy mines located 1,700 km away and the Beloretsko-Inskoye deposit is located only 400 to 500 km away, there is a direct advantage to build this mining and concentrating combine during the forthcoming five-year plan.

The Kholzunskoye iron ore magnetite deposit in Gornyy Altay is of no lesser importance. The kray is also rich in complex ore reserves. For the time being, however, only three nonferrous metallurgy enterprises operate. The richest reserves of mineral salts (common salt, magnesium chloride and sodium sulfate) are concentrated in the salt lakes of the Kulunda Steppe. The saline water of some lakes has an industrial content of bromide. The supply of natural gas to these lakes would create the prerequisites for an overall utilization of raw materials and the production of very scarce chemical products by organochlorine synthesis. Geologists should more carefully study the interior of the earth in the kray. There are still enough "white spots" there.

The weak construction base hampers the development of Altay's productive forces. In this respect the kray lags behind many oblasts in Siberia. The Ministry of Construction and the USSR Ministry of Rural Construction do not take measures to increase capacities. Owing to this major enterprises are built slowly and the kray's lag behind the republic's other regions increases. For example, during the Ninth Five-Year Plan the per-capita capital investments of state and cooperative organizations comprised less than 80 percent of the level of the RSFSR and 63 percent of the level of West Siberia.

The lag in capital construction is reflected primarily in the social and general infrastructure. L. I. Brezhnev once again drew attention to this in his speech at the October (1980) Plenum of the CPSU Central Committee. "The problems of reorganization of rural areas," he stressed, "must be solved energetically and thoroughly and for this resources must be searched for both on a general state scale and in republics, krays and oblasts and on every kolkhoz and sovkhoz."

In its provision with nurseries and kindergartens the kray holds the 57th place and in the per-capita sale of goods, the 44th place among the republic's krays and oblasts. The availability of living space and the level of its amenities are much below the norm.

These factors caused the highest migration among the country's eastern regions. The balance has remained negative for a long time. At the same time, the urban population grew slightly, but rural areas suffered major damage--748,000 people left these areas. Only 25 percent of those that left rural areas settled in Altay's cities. It should be noted that, on the average, some positive changes have taken place in the last few years. For example, in 1971-1979, as compared with 1959-1970, the outflow of the population was lowered by 38 percent as a whole and from rural areas, by 29 percent. During the same time personnel turnover was reduced, although to a lesser extent.

Despite this Altay's economy will develop under the conditions of a complex demographic situation. An absolute reduction in the number of working women is expected in cities during the 11th Five-Year Plan, which will aggravate the situation in the service sphere and at chemical, light and food industry enterprises. All this requires the mobilization of reserves. It must be stated that such work is being done. A council for social and economic planning was established under the kray party committee, an overall program for retaining personnel was developed and two scientific and practical conferences on social and economic planning and the utilization of labor resources were held jointly with the Institute of Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences. Plans for social and economic development are worked out and realized at most enterprises.

The joint work of scientists of the Siberian Department and Altay production workers on the development of the Barnaul automated control system has become widely known both in our kray and in the country. The new Sigma automated control system for third-generation computers has now been developed at the base of the Barnaul automated control system. These systems have been introduced at many enterprises in the kray and the country.

The range of problems connecting the Siberian Department of the Academy of Science with Altay is expanding continuously. Nevertheless, we hope for more. We believe that it is time to form an overall institute capable of solving all the problems connected with the long-term economic development of Altayskiy Kray.

Owing to the relentless attention of the CPSU Central Committee and the Soviet Government Altay has become a large base for the production of agricultural products with highly developed machine building, chemistry, petrochemistry and light and food industries. There is no doubt that the fulfillment of the decisions of the forthcoming 26th party congress will lead to a further increase in the economic potential of our kray and to a new rise in Siberia's role in the development of the national economy of the entire country.

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